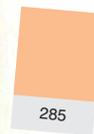
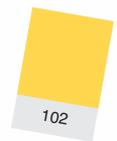
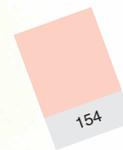
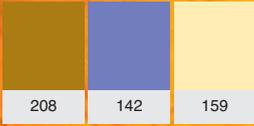


LEE Filters

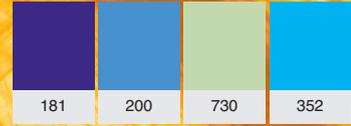


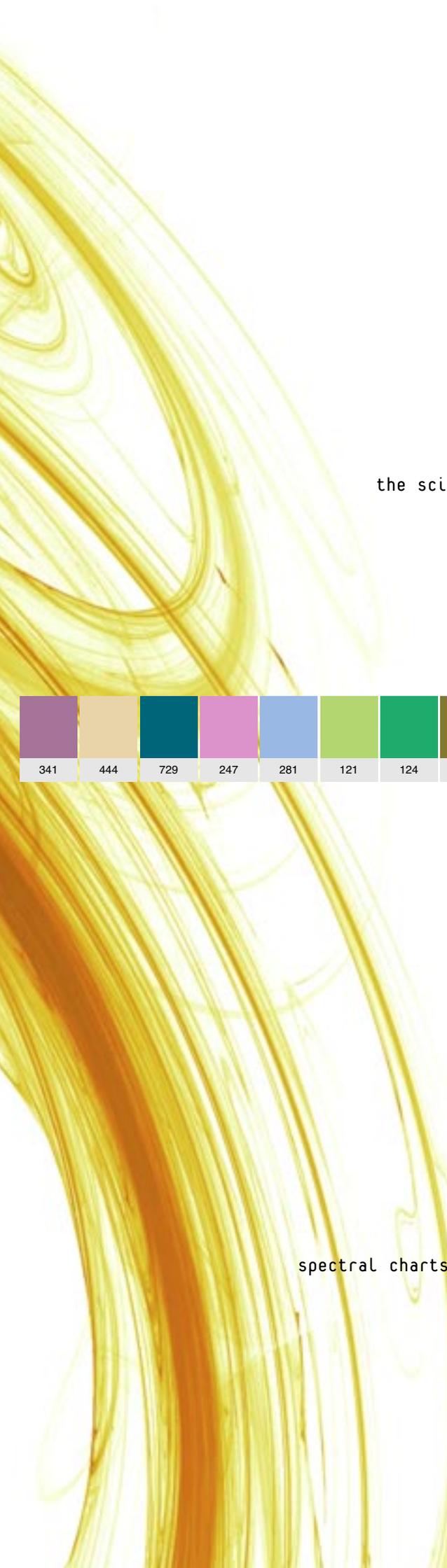
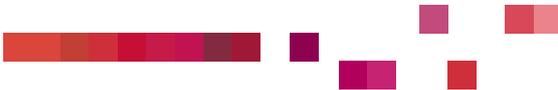
THE ART OF LIGHT





IN SUCCESSFUL COMPANIES, CONTINUOUS ACHIEVEMENT IS DRIVEN BY INNOVATION & UNDERSTANDING. CREATING A PRODUCT OR PROCESS IS ONLY A FIRST STEP - MAINTAINING THE MOMENTUM OF PROGRESS AND SUCCESS OVER MANY YEARS REQUIRES A DEMANDING SET OF DISCIPLINES





corporate statement

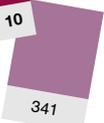


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the science behind the art



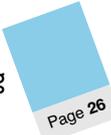
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341	444	729	247	281	121	124	741	108	208	236	748	154	102

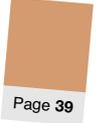
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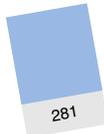


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spectral charts



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an investment in the future

021



■ Answering the need for a better product

It was the demand from the movie production industry for something better that originally led to the birth of LEE Filters, and in the subsequent forty years, our company has always prided itself on designing and producing products that are truly better than anything else available.



Back in the late 1960s, leading Cinematographer David Holmes gathered research and manufacturing expertise from around the globe, and pioneered the use of modern polymeric materials to make filters for film and TV production, theatres and entertainment venues. Our expertise and experience in film and theatre lighting subsequently led us to expand into other areas, including a complete range of filters for architectural use, both indoors and out.



■ Quality is everything

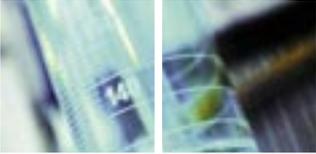
Filters select particular colours of light by absorbing and attenuating parts of the spectrum, and consistent and repeatable performance is vital to the user. The whole filter making process is carried out at our factory in Andover, the company's UK headquarters, so that we have full control of the quality of all the raw materials, and can ensure that the coating process is carried out to meticulous quality standards.



Directors of Photography worldwide rely on the consistent and repeatable performance of LEE Filters.

From the haunted house to the roller coaster, theme parks worldwide have always depended on the endless effects created with LEE Filters.

795



■ Guarding a reputation

We rapidly gained our reputation as the world's leading manufacturer of lighting filter products, but we have only maintained that jealously guarded position over the decades by investing heavily in research. The production of lighting filters is both an art and a science, and we work closely with the film-making artists and bring the latest scientific developments to bear on making the wishes of these artists come true.

■ The Film-makers' Choice

Our never ending passion for providing the best possible product has led us to become the supplier of choice, to leading film and TV programme makers around the world. Countless movies have been lit using LEE Filters, and many companies wouldn't dream of using anything else, recognising that the results of investing in a movie can be significantly enhanced by choosing the world's best filters.



■ Making a rewarding investment

The company culture is one of continuous research and development, always searching for newer and better materials and more effective manufacturing techniques and processes. This culture, backed by significant investments in machinery, ensures that we provide the ultimate in performance, availability, reliability and longevity.



127

787

technical excellence

079



■ Keeping control - Everything under one roof

Our manufacturing facility is known worldwide as the source of the world's highest quality lighting filters. The site is home to our Research and Development Laboratory, where expert scientists and technicians have been responsible for much of the improvement in filter technology over recent decades. Our exacting quality control ensures that lighting directors can rely on filters that exhibit consistent colour performance.

■ The need for continuous R&D

Long-term improvements in filter design and technology have come about because we have developed a deep understanding of the scientific and technical principles which impact on filter performance. The relationships between light sources and filters are often complex, and need an expert knowledge of both the physics of illumination and of materials science, together with long experience of what actually works practically on a 'shoot'.

Nothing stands still in lighting and filter technology, and our researchers have to ensure that they stay at the cutting-edge of new developments in the materials which are the basis of the filters, and that they understand the key implications of new lighting technologies and techniques that are coming along.



*From Broadway to the West End
and from the stage to the box office
LEE Filters provide the tools to get
the job done.*

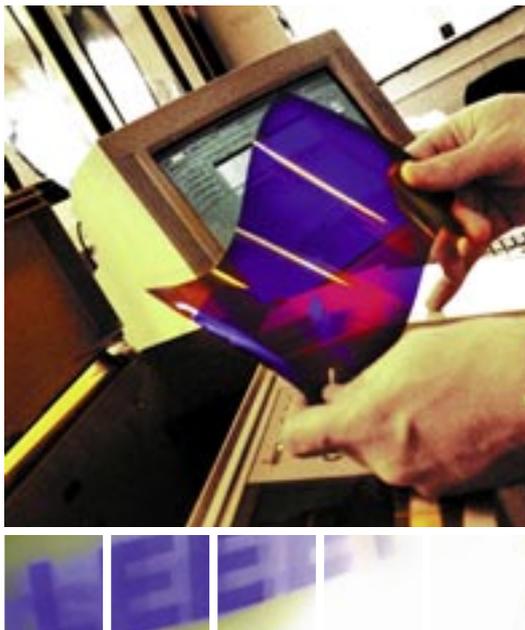


■ Branching out

Our experience and expertise in film and theatre lighting has enabled us to branch out into designing and making filters for various 'architectural' lighting applications. These include the popular coloured fluorescent sleeves, a clear polycarbonate sleeve with a coloured polyester insert. Available in a wide range of colours, these are used by architects in shopping malls, restaurants, clubs, bars and hotel buildings around the world.

We also make glass filters with a dichroic coating for MR16 and PAR16 lights which are increasingly being used for ambient lighting. Filters for these tiny lamps, which provide a lot of heat as well as light, have traditionally used strong colours, which are often unsuitable for homes and offices. Our research team have come up with a whole range of filters with very pale, subtle colours which remove the harsh pure whites from a room, without giving a strong unwanted colour wash.

Every LEE Filter is carefully designed to fulfil a specific function, and its parameters are precisely adjusted to suit the need of the user. Sophisticated technical measurement and monitoring equipment, including computer-controlled spectrophotometers, are used not only during the manufacturing process, but also to check that every filter leaving the factory meets the precise parameters to which it was designed.



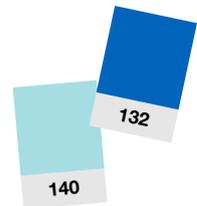
■ A policy of continuous improvement

Filter manufacturing entails the use of high precision machinery to coat a fast-moving roll of polyester film with a precise accurate thickness of dyestuff. The company has invested in new plant as required, to ensure that it produces nothing less than the best. The complex machinery, much of which has actually been designed by or for LEE Filters, is carefully maintained and operated by skilled technicians, many of whom are proud to have been part of the LEE Filters success story for many years.

Because everything is effectively under one roof, we can ensure that all aspects of design and production are constantly under control, and complete records exist of every filter that we have ever made since the factory opened.



*Theatre productions rely on LEE Filters,
who can advise on the best filtering
solutions for different stage plays
and musicals.*



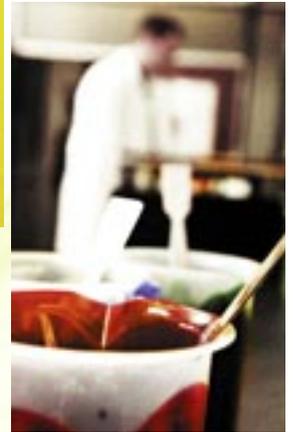
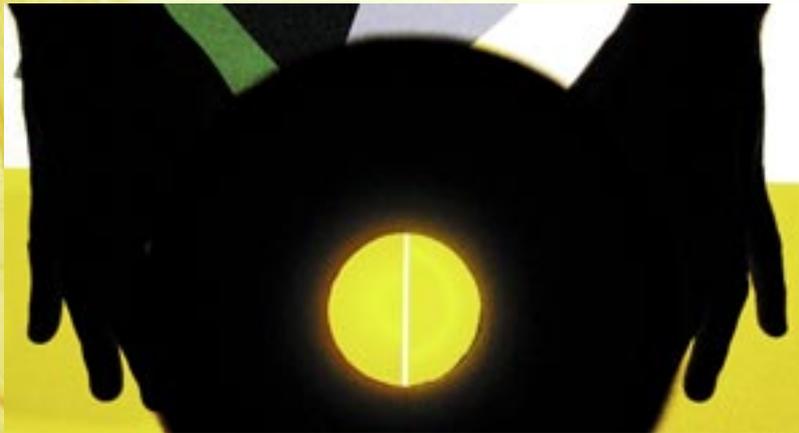
quality control



At LEE Filters, quality control is built in to our whole design and production process - it comes as an integral part of every filter that you buy.

The most appropriate materials are chosen for each application, and precise monitoring throughout the coating and production process ensures that the filter material is the same from the start to the finish of a roll, so that the user can be sure that the colour and the performance of the filter will be consistent throughout.

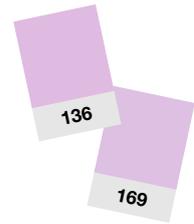
Every filter is accurately checked against a scientifically generated set of parameters, and we are proud to say that nothing that doesn't meet the highest standards ever leaves the factory.



Television production, feature films and video all require specific technical filters to achieve uniformity from lens to screen; let LEE Filters' experts be your guide.



customer service



■ Solution Providers

We are not merely designers and suppliers of filters - a key area of our business is that the expertise of our staff allows us to be true 'solution providers' who can advise and help on all sorts of lighting and filtration tasks and problems. Only by having complete control of the design and manufacturing process can we offer such brilliant service - sometimes taking difficult management decisions to interrupt an existing 'run' and coat a special roll for that very urgent job.



■ Service-it's what we're about

Our goal is to provide you, our customer, with the highest level of service that you know and deserve. As the leading manufacturer of lighting filter we are able to provide a colour consistency from batch to batch that is unmatched in this or any other industry and whether it's a container load that you need or maybe just a few sheets we endeavour to maintain ample stock of the highest quality filters on the market. Please rest assured that whether you are dealing directly with us or with one of our valued distributors your best interests are at hand.

■ No effect too special!

At LEE Filters we take great pride in assisting with the production of custom filters to meet the requests and requirements of specific applications. We have recently produced water proof filters for an under water film production, specific lenses for 3D glasses, custom colours for fluorescent tube inserts and custom dichroic colours for retail applications. Let us know what we can do for you!

■ Education

At LEE Filters we understand the value of education and in continuing the learning process throughout the length of a career. Whether it be through seminars, factory visits, trade shows or conferences we endeavour to educate both current and future filter users on advancements and trends going forward.

■ Supplying the world

While our primary manufacturing is in the UK and our main distribution centres are in the UK and USA, we maintain distributors throughout the world for a truly global supply chain. Rest assured that the filters you require for the commercial in Sydney will match the ones that you just used on a feature in Buenos Aires.

■ LEE Filters - A growing range of applications

Whether it's special Neutral Density filters for Formula 1 cars or special filters for 3D applications our experts are on hand to help with any aspect of your latest project.



*LEE Filters,
your global colour
solutions provider.*

product overview

Roll and Sheet sizes

Our products come in many different sizes, please use the diagrams below as a guide.

<p>Size 7.62m x 1.52m (25' x 60")</p>	<p>Size 6.10m x 1.52m (20' x 60")</p>	<p>Size 7.62m x 1.37m (25' x 54")</p>	<p>Size 7.62m x 1.22m (25' x 48") 2" Core</p>	<p>Size 7.62m x 1.22m (25' x 48") 1" Core</p>	<p>Size 4m x 1.17m (13' x 46")</p>	<p>Size 7.62m x 0.61m (25' x 24")</p>	<p>Size 15.24m x 0.3m (50' x 12")</p>	<p>Size Any width between 2.5cm (1") and 1.17m (46"). All rolls are 7.62m (25') long.</p>
<p>Products 216 250 251 252 416 450 452</p>	<p>Products 204 - 211 223 270 - 275 298 299 402 404 413 414 429</p>	<p>Products 430 - 434 460 - 464</p>	<p>Products Colour Effect Filters Tungsten Conversion Daylight Conversion Neutral Density Fluorescent Correction Arc Correction Ultra Violet Absorption Diffusion Media- Non Flame Retardant Diffusion Media- Flame Retardant Heat Shield</p>	<p>Products Colour Effect Filters Tungsten Conversion Daylight Conversion Neutral Density Fluorescent Correction Arc Correction Ultra Violet Absorption Diffusion Media- Non Flame Retardant Diffusion Media- Flame Retardant Heat Shield</p>	<p>Products Colour Effect HT</p>	<p>Products Black Foil</p>	<p>Products Black Foil</p>	<p>Products Quick Rolls</p> <p>* HT Rolls available as special order</p>
								



Size Panel	Size Panel	Size Full Sheet	Size Half Sheet	Size Half Sheet HT	Size Available in 0.3m (1') lengths. All sheets are 0.43m (17") wide
2.44m x 1.52m (8' x 5')	2.44m x 1.22m (8' x 4')	0.53m x 1.22m (21" x 48")	0.53m x 0.61m (21" x 24")	0.53m x 0.56m (21" x 22")	
Thickness 3mm (1/8")	Thickness 3mm (1/8")				
Products	Products	Products	Products	Products	Products
A204 A209 A210 A211	A204 A205 A207 A208 A209 A210 A211	Colour Effect Filters Tungsten Conversion Daylight Conversion Neutral Density Fluorescent Correction Arc Correction Ultra Violet Absorption Diffusion Media-Non Flame Retardant Diffusion Media-Flame Retardant Heat Shield	Colour Effect Filters Tungsten Conversion Daylight Conversion Neutral Density Fluorescent Correction Arc Correction Ultra Violet Absorption Diffusion Media-Non Flame Retardant Diffusion Media-Flame Retardant Heat Shield	Colour Effect HT	Polariser
Acrylic Panel	Acrylic Panel	Full Sheet	Half Sheet	Half Sheet HT	Polariser

quick rolls

Your high volume solution

Quick Rolls enable you to have a roll of any colour in any width, saving you both time and money. The Quick Roll is pre-cut to your chosen width, so the gel is ready to frame in just one cut, putting an end to waste on the cutting room floor.

Quick Rolls are sold by the width in inches (2.54cm) up to a maximum width of 46" (1.17m) and all rolls are 25' (7.62m) long.

An average cost saving of between 20-30% can be obtained using Quick Rolls compared to buying individual sheets.



HT Quick Rolls are available as a special order.

lighting packs

Essential Toolkits for Lighting Control

Everything you need to control common lighting conditions. Each pack contains a select assortment of 300mm x 300mm (12"x12") pre-cut sheets of LEE lighting filter. A rugged vinyl pouch is ideal for portable storage.

Colour Effects Pack – Colour the backdrop or draw focus with colour. (12 sheets)

No.	Name
106	Primary Red
139	Primary Green
119	Dark Blue
010	Medium Yellow
790	Moroccan Pink
181	Congo Blue

x2 each

Cosmetic Pack – Enhance skin tone by combining pale tints with subtle diffusion. (12 sheets)

No.	Name
184	Cosmetic Peach
187	Cosmetic Rouge
188	Cosmetic Highlight
186	Cosmetic Silver Rose
775	Soft Amber Key 2
791	Moroccan Frost

x2 each

Diffusion Pack – Soften shadows, adjust contrast, shape light. (12 sheets)

No.	Name
216	Full White Diffusion
250	1/2 White Diffusion
251	1/4 White Diffusion
400	LEELux
410	Opal Frost
253	Hampshire Frost

x2 each

Daylight to Tungsten Pack – Convert daylight sources to tungsten. (12 sheets)

No.	Name
204	Full CTO
285	3/4 CTO
205	1/2 CTO
206	1/4 CTO
223	1/8 CTO
208	Full CTO + .6ND Combo

x2 each

Tungsten to Daylight Pack – Convert tungsten light sources to daylight. (12 sheets)

No.	Name
200	Double CTB
201	Full CTB
202	1/2 CTB
203	1/4 CTB
218	1/8 CTB
720	Durham Daylight Frost.

x2 each

Quick Location Pack – A variety of colour corrections, effect, and light shaping tools to control common lighting conditions. (24 sheets)

No.	Name
201	Full CTB
202	1/2 CTB
204	Full CTO
205	1/2 CTO
216	Full White Diffusion
250	1/2 White Diffusion
210	.6 ND
106	Primary Red
181	Congo Blue
738	JAS Green
187	Cosmetic Rouge
188	Cosmetic Highlight
791	Moroccan Frost
775	Soft Amber Key 2
720	Durham Daylight Frost
270	LEE Scrim
280	Black Foil

x2 each

x1 each



Master Location Pack – Our largest variety of colour corrections, effect, and light shaping tools to provide the control you need to master any lighting condition. (36 sheets)

No.	Name
200	Double CTB
201	Full CTB
202	1/2 CTB
203	1/4 CTB
204	Full CTO
205	1/2 CTO
206	1/4 CTO
216	Full White Diffusion
250	1/2 White Diffusion
251	1/4 White Diffusion
210	.6 ND
106	Primary Red
126	Mauve
181	Congo Blue
738	JAS Green
187	Cosmetic Rouge
188	Cosmetic Highlight
791	Moroccan Frost
775	Soft Amber Key 2
720	Blue Durham Frost
244	Plus Green
245	1/2 Plus Green
219	Fluorescent Green
270	LEE Scrim
280	Black Foil

x2 each

x1 each



music packs

These convenient, pre-cut 250mm x 250mm (10"x10") sheets of LEE polyester filters come complete with instructions on how to use colour to enhance the mood of your music. They are perfect for use in small night clubs and are packaged in six different sets.

DJ Pack 1	
No.	Name
015	Deep Straw
020	Medium Amber
024	Scarlet
026	Bright Red
048	Rose Purple
068	Sky Blue
116	Medium Blue-Green
181	Congo Blue
323	Jade
325	Mallard Green
328	Follies Pink
343	Special Medium Lavender

x1 each

DJ Pack 2	
No.	Name
027	Medium Red
089	Moss Green
105	Orange
113	Magenta
141	Bright Blue
180	Dark Lavender
197	Alice Blue
328	Follies Pink
735	Velvet Green
744	Dirty White
781	Terry Red
797	Deep Purple

x1 each

Inspiration Pack 1	
No.	Name
009	Pale Amber Gold
058	Lavender
143	Pale Navy Blue
195	Zenith Blue

x3 each

Inspiration Pack 2	
No.	Name
063	Pale Blue
106	Primary Red
735	Velvet Green
764	Sun Colour Straw

x3 each

Rock n' Roll Pack 1	
No.	Name
116	Medium Blue-Green
128	Bright Pink
158	Deep Orange
181	Congo Blue

x3 each

Rock n' Roll Pack 2	
No.	Name
048	Rose Purple
132	Medium Blue
327	Forest Green
341	Plum

x3 each



colour magic packs

The LEE Filters Colour Magic series is a set of eight individual packs each containing a selection of 12 filters 250mm x 300mm (10" x 12") that relate to a particular aspect of lighting and studio work. Colour Magic offers an opportunity to get to know the performance of the various filters on offer in a cost effective way.

Original Pack – create 50 colours from 12	
No.	Name
101	Yellow
116	Medium Blue Green
118	Light Blue
122	Fern Green
126	Mauve
128	Bright Pink
129	Heavy Frost
144	No Colour Blue
179	Chrome Orange
180	Dark Lavender
192	Flesh Pink
228	Brushed Silk

x1 each

Saturates Pack – a selection of strong and vibrant colours for more intense colour combinations	
No.	Name
027	Medium Red
101	Yellow
105	Orange
116	Medium Blue Green
120	Deep Blue
126	Mauve
129	Heavy Frost
135	Deep Golden Amber
139	Primary Green
181	Congo Blue
182	Light Red
332	Special Rose Pink

x1 each

Studio Pack – a range of technical filters for basic light source control	
No.	Name
201	Full CTB
281	Three Quarters CTB
204	Full CTO
285	Three Quarters CTO
298	0.15 Neutral Density
209	0.3 Neutral Density
210	0.6 Neutral Density
211	0.9 Neutral Density

x2 each

x1 each

Complementary Pack – a starter pack for exploring the basics of colour addition and subtraction	
No.	Name
164	Flame Red
124	Dark Green
119	Dark Blue
176	Loving Amber
174	Dark Steel Blue
138	Pale Green
101	Yellow
115	Peacock Blue
128	Bright Pink
007	Pale Yellow
117	Steel Blue
035	Light Pink

x1 each

Light Tint Pack – paler shades to give more subtle effects and to filter white light from the lamp	
No.	Name
003	Lavender Tint
007	Pale Yellow
009	Pale Amber Gold
035	Light Pink
061	Mist Blue
063	Pale Blue
103	Straw
154	Pale Rose
162	Bastard Amber
169	Lilac Tint
213	White Flame Green
255	Hollywood Frost

x1 each

Studio Plus Pack – a range of technical filters for fine control of light sources	
No.	Name
202	Half CTB
203	Quarter CTB
218	Eighth CTB
205	Half CTO
206	Quarter CTO
223	Eighth CTO

x2 each

Tint Pack – lighting filters which complement the original Colour Magic pack to create alternative shades	
No.	Name
002	Rose Pink
048	Rose Purple
088	Lime Green
100	Spring Yellow
108	English Rose
131	Marine Blue
157	Pink
164	Flame Red
174	Dark Steel Blue
228	Brushed Silk
250	Half White Diffusion
344	Violet

x1 each

Arc Correction Pack – a selection of technical filters for colour correction	
No.	Name
205	Half CTO
206	Quarter CTO
219	LEE Fluorescent Green
241	LEE Fluorescent 5700K
242	LEE Fluorescent 4300K
243	LEE Fluorescent 3600K
244	Full Plus Green
245	Half Plus Green

x2 each

x1 each

x2 each

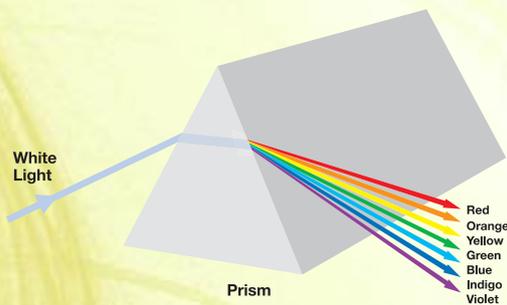


the science behind the art

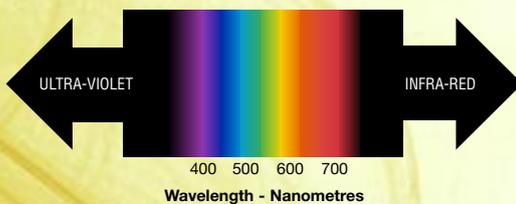
Light

Light is energy that travels in wave form. The human eye responds to certain wavelengths and these make up the visible spectrum. Wavelengths outside this spectrum are invisible to us, such as infra red, ultra violet and X-ray.

Isaac Newton showed that by shining white light through a glass prism it could be separated back into its different wavelengths.



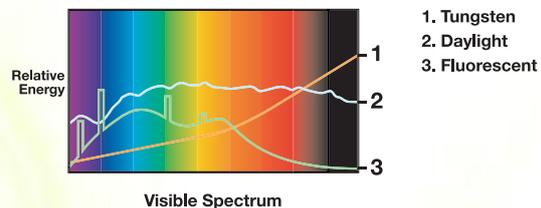
Each wavelength within the visible spectrum is recognised by our eyes as providing a particular colour sensation, the diagram below clearly indicates the visible colours and their corresponding wavelengths. White light consists of all of the visible wavelengths, present in equal amounts.



By using filters to selectively reduce the level of light at certain wavelengths we can create coloured light to meet our individual requirements, whether technical or aesthetic.



Most artificial light sources do not actually produce white light. For example, incandescent sources such as tungsten generate light which has more energy at the red end of the spectrum, whereas a fluorescent source often has spikes of energy mainly in the blue and green region. Filters can be used to correct these differences and make one light source appear like another.



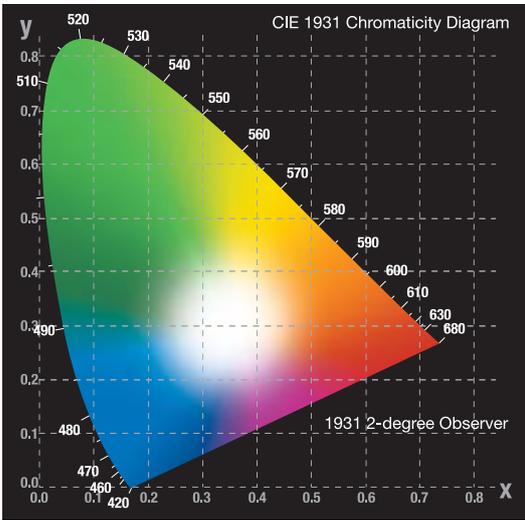
In order to record and communicate colour accurately, you either need to create a physical example of that colour that will never fade or become damaged, or use a mathematical model. A model uses numbers to describe different attributes of a certain colour, these being HUE, SATURATION and LIGHTNESS. The HUE describes the physical colour - red, yellow, green etc. SATURATION is a perception of how strong the hue of the colour is represented in the sample. The LIGHTNESS (or darkness) of a colour is perceived, when a comparison made to a similar area that is not coloured, but lit with the same strength of illumination.

As there are three attributes to a colour, the numbers associated with them in a mathematical model can be thought of as a position in a three dimensional shape, this shape is called a colour space.

The particular colour space used by LEE Filters technicians was devised in 1931 by the Commission International Eclairage (CIE) and is one of the many internationally recognised standard colour spaces.



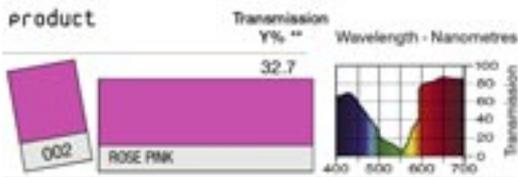
The HUE and SATURATION of any colour can be represented by its position on a chromaticity diagram, as seen below. The diagram contains all visible colours, and all possible densities of these colours, in a two dimensional configuration. Pale colours in the centre and saturated versions of those same colours at the edges. A colour's position on this diagram will be represented by its Chromaticity Co-ordinates.



How to use this brochure.

The technical information contained in this brochure is designed to help you choose the correct colour for your requirements in a number of different ways.

The spectral power distribution (SPD) curves illustrated in the booklet at the back of this brochure, show the percentage of light at each wavelength across the visible spectrum that is passed when light is shone through the filter. From this data you can tell which constituent parts of the source will be transmitted, and which will be reduced.



Transmission Y%	Absorption	Chromaticity Co-ordinates	
		x	y
54.1	0.27	0.281	0.269
75.7	0.12	0.303	0.300
59.5	0.23	0.294	0.281

The Y% figure is representative of overall average transmission of that filter, as perceived by the human eye. The Y value is actually one of the TRISTIMULUS VALUES, a set of values unique to each colour, that are calculated mathematically from the data contained in the SPD graph.

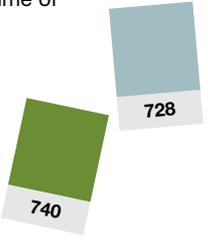
The absorption (abs) of a filter is calculated from the Y% value, and is another way of expressing the light stopping properties of that filter. Abs is a linear scale, so values can be added or subtracted more easily than using Y%.

Y%	abs
50	0.3 (1 Stop)
25	0.6 (2 Stop)
12.5	0.9 (3 Stop)

The Chromaticity co-ordinates published for each colour are measured and calculated using a theoretical standard light source, and can be plotted on the chromaticity diagram to establish that particular colour's characteristics in relation to all other colours.

Choosing filter materials

Since subtractive filters achieve their purpose by absorbing energy, knowing the expected spectral performance of a particular filter and in particular, its overall Transmission Efficiency Y, can help the user to select the materials used, whether being polyester, high temperature polymer or glass. Each material has recommended temperature limits, and our staff are always happy to advise on the best material for a particular job, and on its durability. The lifetime that may be expected from a particular filter in a particular application can often be difficult to predict, because it depends upon many different factors. We have many years of experience in lots of different areas, and our staff will readily offer the practical knowledge that they have gained as to how to prolong the lifetime of any particular filter.



product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%	x	y	
702 Special Pale Lavender	A cold lavender when used with a full tungsten source, but warms as the source is dimmed. Good as a fill for slow sunset fades.	54.1	0.27	0.281	0.269
003 Lavender Tint	Subtle cool wash for stage and studio lighting.	75.7	0.12	0.303	0.300
169 Lilac Tint	Pale lavender. Good for almost white light with a cool tint.	59.5	0.23	0.294	0.281
136 Pale Lavender	Pantomime, ballroom sets, enhances dark skin tones in follow spots.	43.2	0.36	0.288	0.254
170 Deep Lavender	Set lighting - discos - theatres.	25.7	0.59	0.278	0.211
345 Fuchsia Pink	Musical revue, pantomime, sultry scenes.	15.5	0.81	0.252	0.156
704 Lily	A cool lavender with little red content. Good for romantic evening exteriors.	40.0	0.40	0.267	0.221
052* Light Lavender	General area side lights. Great for basic followspot colour. Excellent back light.	33.0	0.48	0.259	0.218
194 Surprise Pink	With 193 for musicals.	22.3	0.65	0.240	0.183
798 Chrysalis Pink	A new deep lavender with a dash of rose blusher.	3.8	1.43	0.190	0.060
701 Provence	The colour of the Lavender fields of the South of France. A redder version of 180 for use on cameras balanced to tungsten sources.	9.4	1.03	0.199	0.098
058* Lavender	Excellent backlight. Creates a new dimension.	8.9	1.05	0.212	0.099
343 Special Medium Lavender	Theatre and T.V. effect lighting, backlighting.	6.0	1.22	0.182	0.081
707* Ultimate Violet	Used in musical performances for general colour washes and set lighting.	2.0	1.69	0.170	0.042
180 Dark Lavender	Pleasing effects for theatrical lighting, backlighting.	6.6	1.18	0.191	0.072
706 King Fals Lavender	A cold lavender.	5.5	1.26	0.186	0.091
344 Violet	Dusk effect, good skin tones, romantic effect.	20.0	0.70	0.213	0.175
137 Special Lavender	Moonlight, musical / romantic scenes, enhances skin tones.	26.4	0.58	0.231	0.175
053* Paler Lavender	Subtle cool wash.	62.2	0.21	0.284	0.284
709 Electric Lilac	Provides good colour rendering which creates sharp edges, adding a touch of drama.	34.0	0.47	0.238	0.227
142 Pale Violet	Moonlight, cycloramas, highlighting pot plants.	20.1	0.70	0.209	0.148
199 Regal Blue	A deep lavender blue, that strongly enhances skin tones.	5.4	1.26	0.161	0.070
181* Congo Blue	Looks like black light when used with a fluorescent source. Great effect colour. Very saturated.	0.8	2.10	0.158	0.035
799 Special K.H. Lavender	A deep lavender that brings out the UV.	1.4	1.86	0.158	0.035
071* Tokyo Blue	Deep blue, use for midnight scenes, cycloramas.	1.0	2.00	0.151	0.030

* Also available in High Temperature (HT) version



product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
198 Palace Blue	Dark moonlight - romantic evening.	1.7	1.78	0.159	0.066
713* J.Winter Blue	A very dark blue with a high UV content. Good when used in high concentrations for a moody and powerful stage colour wash.	1.1	1.97	0.148	0.037
120* Deep Blue	Pleasing effect for theatrical lighting.	2.1	1.68	0.149	0.051
085* Deeper Blue	Deep warm blue. Good for back and side lighting.	2.5	1.60	0.143	0.065
716* Mikkel Blue	A romantic blue to produce a night effect.	3.9	1.4	0.146	0.054
363* Special Medium Blue	Cool moonlight, mood effects.	4.2	1.37	0.141	0.070
195* Zenith Blue	Moonlight for dark sets, cycloramas.	2.7	1.56	0.142	0.046
119* Dark Blue	Good for mood effects created by backlight and sidelight. Creates great contrast.	3.1	1.51	0.142	0.054
715* Cabana Blue	A deep blue that still has enough transmission to work encouragingly well on television.	6.8	1.17	0.152	0.075
723 Virgin Blue	This is a pure blue, not too green and not too lavender, yet still feels warm for a blue with an early morning feel.	7.0	1.16	0.158	0.100
721* Berry Blue	Used in musical performances for rear colour wash, or set lighting.	6.5	1.19	0.147	0.084
722 Bray Blue	A purer blue with very little red in it.	5.2	1.28	0.139	0.086
714 Elysian Blue	A new deeper version of Alice blue.	6.8	1.17	0.151	0.097
079* Just Blue	Good colour mixing blue. Great for cyclorama lighting.	5.6	1.25	0.145	0.072
710 Spir Special Blue	A cool industrial blue.	12.2	0.91	0.180	0.133
197* Alice Blue	Great for cyclorama lighting. Deep blue skies.	10.4	0.98	0.164	0.118
075 Evening Blue	Good for night scenes, romantic moonlight.	12.5	0.90	0.158	0.117
712 Bedford Blue	A smoky warm blue. Good for skin tones.	17.9	0.75	0.183	0.158
719 Colour Wash Blue	To allow low intensity tungsten to hold a cold/blue feel.	19.3	0.71	0.188	0.171
200 Double CTB	Converts tungsten to daylight.	16.2	0.79	0.179	0.155
711 Cold Blue	To give a cold/grey H.M.I. effect from a tungsten source. Will also help blend when using both tungsten and HMI sources.	14.4	0.84	0.223	0.198
366 Cornflower	Seasonal mood lighting, pale moonlight.	17.7	0.75	0.193	0.190
201 Full CTB	Converts tungsten to photographic daylight.	34.0	0.47	0.228	0.233
708 Cool Lavender	For use as a warmer tint without turning yellow and to recreate the colour of fluorescent lighting.	43.4	0.36	0.257	0.260
281 Threequarters CTB	Converts tungsten to daylight.	45.5	0.35	0.239	0.258

(Measured to source C, Correlated Colour Temperature of 6774K)

colour range

product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
202 Half CTB	Converts tungsten to daylight.	54.9	0.26	0.261	0.273
061* Mist Blue	Night scenes, cool wash.	62.4	0.21	0.268	0.284
203 Quarter CTB	Converts tungsten to daylight.	69.2	0.16	0.285	0.294
218 Eighth CTB	Converts tungsten to daylight.	81.3	0.09	0.299	0.307
063* Pale Blue	Cool front light wash, good for creating an overcast look for cold weather.	54.4	0.26	0.252	0.270
174 Dark Steel Blue	Set lighting - creates good moonlight shadows.	30.0	0.52	0.204	0.205
161 Slate Blue	Pure medium blue. Good for skies, moonlight, dusk.	24.8	0.61	0.176	0.176
068 Sky Blue	Morning skin tones, night sky. Cyclorama lights.	13.4	0.87	0.151	0.128
132* Medium Blue	Deep moonlight. Great for colour mixing.	8.3	1.08	0.137	0.110
165 Daylight Blue	Moonlight.	20.0	0.70	0.159	0.158
141* Bright Blue	Very dramatic when used as moonlight.	18.6	0.75	0.129	0.159
196 True Blue	Moonlight.	26.6	0.57	0.175	0.197
143 Pale Navy Blue	Moonlight, cyclorama night effect.	16.2	0.79	0.170	0.205
352 Glacier Blue	Cold blue, good for cool atmospheric mood setting.	23.4	0.63	0.171	0.190
724 Ocean Blue	Useful at low levels of light, dull skies, - moonlight.	36.2	0.44	0.189	0.222
140 Summer Blue	Good for light midday sky. Light blue tinted wash.	41.4	0.38	0.201	0.245
117 Steel Blue	Good for cool washes. Adds a pale green tint. Great for emulating icy weather on stage.	54.7	0.26	0.223	0.278
725 Old Steel Blue	Cool wash, useful for highlights.	56.2	0.24	0.239	0.270
353 Lighter Blue	Daylight effects.	41.0	0.39	0.193	0.246
144 No Colour Blue	Clean blue with hints of green. Good for moonlight and side light.	32.4	0.49	0.183	0.228
118* Light Blue	Strong night effect.	22.2	0.65	0.149	0.113
183 Moonlight Blue	Moonlight, cycloramas.	18.7	0.73	0.128	0.168
172* Lagoon Blue	Floodlit warm wash - underwater scenes - ballet.	25.4	0.60	0.141	0.220
729* Scuba Blue	Used in musical performances for a rear colour wash, or set lighting.	8.7	1.06	0.110	0.241
116* Medium Blue-Green	Pleasing effect for theatrical lighting.	16.5	0.78	0.113	0.280

* Also available in High Temperature (HT) version



product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
		(Measured to source C, Correlated Colour Temperature of 6774K)			
354 Special Steel Blue	Cooling blue-green wash for stage and set lighting.	39.2	0.41	0.173	0.265
115* Peacock Blue	Pleasing effect on sets, cyclorama cloths, back lighting (e.g. ice rinks, galas, etc).	35.2	0.46	0.134	0.296
131 Marine Blue	Romantic moonlight - ballet - underwater scenes.	41.3	0.38	0.199	0.305
241 LEE Fluorescent 5700 Kelvin	Converts tungsten to fluorescent light of 5700K (cool white/daylight).	27.4	0.56	0.231	0.290
728 Steel Green	Approaching storms. Overcast days. Cold steely light. Malevolent moonlight.	45.9	0.33	0.256	0.302
730 Liberty Green	A good green for creating mystery and suspense.	67.5	0.17	0.277	0.330
243 LEE Fluorescent 3600 Kelvin	Converts tungsten to fluorescent light of 3600K (warm white).	45.7	0.34	0.286	0.370
242 LEE Fluorescent 4300 Kelvin	Converts tungsten to fluorescent light of 4300K (white).	37.3	0.43	0.262	0.346
219 LEE Fluorescent Green	General tungsten to fluorescent correction for use when fluorescent colour temp is unknown, to provide medium correction.	31.0	0.51	0.219	0.334
323 Jade	Use for underwater scenes, cycloramas, backlighting.	32.0	0.50	0.165	0.367
322 Soft Green	Cool green, use for gobo cover, pantomime, cycloramas.	38.3	0.42	0.201	0.364
325 Mallard Green	Good for mood setting, undergrowth.	7.7	1.11	0.112	0.412
735 Velvet Green	A beautiful background colour. Victorian melodrama. A night-time green.	11.5	0.93	0.103	0.536
124* Dark Green	Cycloramas - good for back lighting.	29.7	0.53	0.123	0.586
327 Forest Green	Deep green, sinister forest scenes, cycloramas, backlighting.	4.2	1.38	0.162	0.496
090* Dark Yellow Green	Highlighting for forest effects.	10.9	0.96	0.184	0.641
736 Twickenham Green	A powerful green with depth, for music or light entertainment.	7.2	1.14	0.175	0.740
740 Aurora Borealis Green	Primary jungle colour. Removes some red and blue. Works best with Daylight bulbs. Sodium lamp effect.	3.7	1.43	0.337	0.617
139* Primary Green	Set lighting, cycloramas.	11.9	0.92	0.196	0.712
089* Moss Green	Mood creator. Used with gobos, creates a great foliage effect.	29.8	0.53	0.259	0.547
122* Fern Green	Cycloramas - good for mood effect.	51.5	0.28	0.234	0.543
738* JAS Green	A rich yellowish green: useful as a concert stage wash where darker skin tones, costume and set are a consideration.	52.3	0.28	0.315	0.587
121* LEE Green	Dense foliage, tropical or woodlands effect.	64.0	0.20	0.302	0.534
088 Lime Green	Use with gobos for leafy glades - pantomimes - slightly sinister atmosphere.	70.9	0.15	0.356	0.511
138 Pale Green	Good with gobos for wooded scenes.	79.9	0.10	0.331	0.433

colour range

product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
<i>(Measured to source C, Correlated Colour Temperature of 6774K)</i>					
244 LEE Plus Green	Approximately equivalent to CC30 green.	74.2	0.12	0.324	0.388
213 White Flame Green	Corrects white flame carbon arcs by absorbing ultra violet.	80.0	0.10	0.317	0.359
245 Half Plus Green	Approximately equivalent to CC15 green.	81.7	0.08	0.319	0.355
246 Quarter Plus Green	Approximately equivalent to CC075 green.	84.6	0.07	0.315	0.337
278 Eighth Plus Green	Provides very slight green cast.	87.7	0.06	0.313	0.327
130 Clear	Used in animation and projection work.	95.0	0.02	0.311	0.317
226 LEE UV	Transmission of less than 50% at 410nms.	91.5	0.04	0.314	0.321
159 No Colour Straw	Warm effect, sunlight.	89.4	0.05	0.325	0.337
444 Eighth CT Straw	Converts 6500K to 5700K - daylight to tungsten light with yellow bias.	83.1	0.08	0.323	0.332
223 Eighth CTO	Converts daylight to tungsten light.	85.2	0.07	0.328	0.332
212 LCT Yellow (Y1)	Reduces colour temperature of low carbon arcs to 3200K.	88.7	0.05	0.340	0.363
007* Pale Yellow	Sunlight.	85.4	0.07	0.339	0.363
443 Quarter CT Straw	Converts 6500K to 5100K - daylight to tungsten light with yellow bias.	79.8	0.10	0.338	0.349
206 Quarter CTO	Converts daylight to tungsten light.	79.1	0.10	0.346	0.340
763 Wheat	Adds warmth, sunlight.	84.3	0.07	0.343	0.357
103 Straw	Pale sunlight through window effect - warm winter effect.	81.6	0.09	0.336	0.359
764 Sun Colour Straw	Adds warmth, bright sunlight.	80.5	0.09	0.365	0.380
442 Half CT Straw	Converts 6500K to 4300K - daylight to tungsten light with yellow bias.	71.2	0.15	0.370	0.378
205 Half CTO	Converts daylight to tungsten light.	70.8	0.15	0.374	0.364
162 Bastard Amber	Warm white, warm wash, lamplight.	77.7	0.11	0.348	0.328
009* Pale Amber Gold	Perfect warm front light for any skin tone.	71.1	0.15	0.376	0.371
765 LEE Yellow	Useful for producing a strong sunlight effect.	80.2	0.10	0.389	0.412
013* Straw Tint	Warmer than other straw colours. Good sunlight effect when used in contrast with ambers and blues.	72.1	0.14	0.392	0.392
285 Threequarters CTO	Converts daylight to tungsten light.	61.3	0.21	0.400	0.387
744 Dirty White	Correct a daylight source to an off white tungsten source. Used with a tungsten source provides a "dingy" effect like a smoky bar.	57.9	0.24	0.421	0.412

* Also available in High Temperature (HT) version



product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
		(Measured to source C, Correlated Colour Temperature of 6774K)			
204 Full CTO	Converts daylight to tungsten light.	55.4	0.26	0.437	0.392
441 Full CT Straw	Converts 6500K to 3200K - daylight to tungsten light with yellow bias.	57.3	0.24	0.426	0.407
236 HMI (to Tungsten)	Converts HMI to 3200K, for use with Tungsten film.	58.2	0.24	0.426	0.376
773 Cardbox Amber	Warm tint for skin tones.	60.2	0.22	0.400	0.351
108 English Rose	Warm tint wash - dark flesh tones - softer skin tones.	57.1	0.24	0.412	0.352
776 Nectarine	Romantic sunset. Period pieces.	52.9	0.27	0.424	0.368
147 Apricot	Sunrise, sunset, lamplight.	53.0	0.28	0.446	0.381
237 CID (to Tungsten)	Converts CID to 3200K, for use with tungsten film.	38.5	0.41	0.430	0.365
779 Bastard Pink	Deep sunset. Useful on dark skin tones.	38.8	0.41	0.501	0.336
008* Dark Salmon	Enhances dark skin tones, sunsets, ballroom sets.	35.4	0.45	0.498	0.347
017 Surprise Peach	Skin tones - mood light.	19.6	0.71	0.439	0.372
127 Smokey Pink	Cycloramas - set lighting, discos.	12.0	0.92	0.397	0.265
748 Seedy Pink	A smoky pink. Good for tungsten on skin tones.	14.4	0.84	0.373	0.263
238 CSI (to Tungsten)	Converts CSI to 3200K, for use with tungsten film.	29.8	0.53	0.372	0.331
747 Easy White	Primarily developed for fluorescents to ensure warm, comfortable light and flattering skin tones.	31.1	0.51	0.389	0.344
156 Chocolate	Warms light and reduces the intensity.	26.4	0.58	0.380	0.363
746 Brown	To give a murky, dirty feel to tungsten. A darker, less pink chocolate.	1.5	1.82	0.498	0.437
208 Full CTO +.6ND	Converts daylight to tungsten 6500K to 3200K and reduces light 2 stops.	15.6	0.81	0.442	0.394
207 Full CTO +.3ND	Converts daylight to tungsten 6500K to 3200K and reduces light 1 stop.	32.5	0.49	0.435	0.386
232 Super Correction W.F. Green to Tungsten	Converts white flame arc to 3200K, for use with tungsten film.	37.4	0.43	0.423	0.385
230 Super Correction LCT Yellow	Converts yellow carbon arc (of low colour temperature) to tungsten.	41.9	0.38	0.367	0.368
741 Mustard Yellow	Spooky when used in haze. Removes some red and blue. Works best with daylight bulbs. Sodium lamp effect.	3.3	1.48	0.506	0.491
100 Spring Yellow	Sunlight wash - use with gobos, disco, dark skin tones.	84.2	0.08	0.410	0.502
010* Medium Yellow	Pure bright yellow. Not good for acting areas but great for special effects and accents.	86.5	0.06	0.426	0.509
101 Yellow	Sunlight and window effect - pleasant in acting areas.	80.0	0.10	0.451	0.507

colour range

product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
102 Light Amber	Warm yellow colour. Great for candlelight or warm bright sunlight effects.	75.1	0.12	0.434	0.440
767 Oklahoma Yellow	A rich blend of bright sunshine and warm ochre overtones.	68.9	0.16	0.481	0.501
104 Deep Amber	Good for sunlight effect, accents, side light. Be careful of skin tones under the reddish tint of this colour.	63.9	0.20	0.496	0.462
015* Deep Straw	Warm amber light. Good for effects such as candlelight and fire.	60.8	0.22	0.517	0.460
179 Chrome Orange	Combination of 1/2 CTO and double strength 104, sunlight.	54.0	0.27	0.520	0.460
020* Medium Amber	Afternoon sunlight, candlelight, great side light.	50.7	0.30	0.523	0.419
770 Burnt Yellow	A colour that feels warm and dense on camera, a balance between 179 and 105.	47.7	0.32	0.545	0.447
105 Orange	Mainly light entertainment, functions. Fire effect if used with 106, 166, 104.	41.3	0.38	0.563	0.428
134 Golden Amber	Great for emulating a late in the day sunset. Side lighting, cyclorama lighting.	37.8	0.42	0.501	0.371
158 Deep Orange	Fire effect.	29.9	0.52	0.588	0.403
777 Rust	A vivid rust colour effect.	24.3	0.61	0.576	0.416
021* Gold Amber	Great for sunsets, cyclorama lighting and fire effects.	31.3	0.51	0.586	0.396
778* Millennium Gold	Useful for lighting architecture: it produces a rich amber when used on a tungsten source, or a much cooler effect when used on a HMI lamp.	27.3	0.56	0.606	0.382
022* Dark Amber	Backlight.	23.9	0.62	0.647	0.339
135 Deep Golden Amber	Fire effect.	19.5	0.71	0.667	0.326
025 Sunset Red	Warm stage wash, TV studio wash, sunset effect.	26.4	0.58	0.566	0.359
781 Terry Red	A strong amber red that works well when used against reds, and dark ambers, in wash combinations, and on cycloramas.	19.1	0.72	0.643	0.348
019* Fire	Strong red/amber. Good for fire effects.	18.9	0.72	0.664	0.310
164 Flame Red	Special effects and great for fire effects.	18.0	0.75	0.659	0.302
182 Light Red	Theatre and television effect lighting, cycloramas.	11.0	0.96	0.670	0.313
106 Primary Red	Strong red effect, cycloramas.	9.3	1.03	0.699	0.285
026* Bright Red	Vibrant red, good for cyclorama lighting.	8.6	1.06	0.712	0.281
029 PLASA Red	Fire effect, musicals, cycloramas.	5.8	1.24	0.693	0.303
789 Blood Red	For a deep saturated red effect. Used when a strong vivid red effect is required.	1.2	1.91	0.677	0.314
027* Medium Red	Cyclorama lighting, side lighting, footlights. Good for colour mixing.	3.6	1.44	0.712	0.261

* Also available in High Temperature (HT) version



product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
787 Marius Red	Nice deep full red. Rose leaf colour.	1.0	2.00	0.714	0.283
046* Dark Magenta	Very strong pink, good for back lighting.	6.0	1.22	0.572	0.223
113 Magenta	Very strong - used carefully for small areas on set.	10.9	0.96	0.563	0.217
148 Bright Rose	Fire effects, musicals.	14.4	0.84	0.482	0.238
024* Scarlet	Pantomimes, ballroom sets, fire effects.	18.7	0.73	0.561	0.296
166 Pale Red	Cycloramas.	25.0	0.60	0.532	0.263
193 Rosy Amber	Warm, emotional, romantic.	36.0	0.44	0.473	0.279
157 Pink	Dance sequences (useful for softening white costumes without affecting skin tones).	36.4	0.44	0.457	0.272
107 Light Rose	Good for general washes. Good for followspots.	48.0	0.32	0.407	0.284
109 Light Salmon	Interesting backlight.	54.9	0.26	0.391	0.295
153 Pale Salmon	Backlighting in conjunction with white light.	64.9	0.19	0.362	0.303
176 Loving Amber	Backlight and general area, great for sunrise, warms skin tones.	50.2	0.30	0.407	0.321
790 Moroccan Pink	A rich natural pink, good for producing late afternoon sun effects.	58.1	0.24	0.378	0.324
004* Medium Bastard Amber	Naturally enhances skin tones.	64.1	0.19	0.370	0.335
151 Gold Tint	Pleasing effect for theatrical lighting.	69.4	0.16	0.361	0.321
152 Pale Gold	Interior lighting to enhance skin tones.	70.7	0.15	0.370	0.332
154 Pale Rose	Pleasing effect for theatrical lighting, lamplight.	73.4	0.14	0.350	0.318
279 Eighth Minus Green	Provides very slight magenta correction.	86.5	0.06	0.312	0.311
249 Quarter Minus Green	Approximately equivalent to CC075 magenta.	82.4	0.08	0.312	0.307
248 Half Minus Green	Approximately equivalent to CC15 magenta.	72.0	0.14	0.317	0.297
035* Light Pink	Musical reviews. Warm wash.	61.3	0.21	0.335	0.289
247 LEE Minus Green	Approximately equivalent to CC30 magenta.	57.8	0.22	0.325	0.279
039 Pink Carnation	Soft, cool pastel pink, good for backlighting and general colourwash.	60.2	0.22	0.320	0.268
110 Middle Rose	Pleasing effects for theatrical lighting.	47.5	0.32	0.351	0.249
036* Medium Pink	Good for general washes. Side lighting.	45.4	0.34	0.360	0.268

(Measured to source C, Correlated Colour Temperature of 6774K)

colour range

product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		x	y
192 Flesh Pink	Musical and pantomime key lighting.	34.9	0.46	0.410	0.237
341 Plum	Romantic, atmospheric set lighting.	19.4	0.71	0.309	0.256
794 Pretty 'n Pink	Creates warm and soft effects.	46.8	0.33	0.335	0.251
111 Dark Pink	Good for cycloramas.	31.9	0.50	0.389	0.215
002 Rose Pink	Strong pink wash cycloramas.	32.7	0.50	0.328	0.202
328 Follies Pink	Dramatic stage lighting.	21.6	0.67	0.335	0.180
128 Bright Pink	Created for use as back lighting, side lighting. Good for "specials". Great for musicals.	13.7	0.86	0.401	0.151
793 Vanity Fair	A rich glamorous pink, good for use on special occasions.	12.0	0.92	0.419	0.170
332 Special Rose Pink	Pantomimes, light entertainment etc. Strong stage wash.	10.5	0.98	0.465	0.193
795 Magical Magenta	Rich mixture of red and pinks.	13.1	0.88	0.327	0.138
048 Rose Purple	Good for emulating evening. Great backlight.	13.9	0.86	0.288	0.167
049 Medium Purple	A strong cheerful glow, for cycloramas and pantomimes.	4.5	1.35	0.287	0.102
126 Mauve	Good for back lighting. Dark magenta / purple adds drama, mood.	4.1	1.38	0.287	0.082
797* Deep Purple	Used in musical performances for general colour washes and set lighting.	2.3	1.65	0.235	0.065

* Also available in High Temperature (HT) version

coloured frosts

product	effect/colour	Transmission	Absorption	Chromaticity	Co-ordinates
		Y%		X	Y
791# Moroccan Frost	Smooths PAR or flood washes of large areas. Useful for houselights; good for interior colour washes.	57.2	0.24	0.376	0.322
749# Hampshire Rose	Combines flesh tone warmer 154 with some Hampshire Frost.	74.0	0.13	0.339	0.318
774 Soft Amber Key 1	Used for producing a warm key light colour.	70.6	0.15	0.366	0.348
775 Soft Amber Key 2	Used for producing a warm key light colour.	58.4	0.23	0.409	0.363
705# Lily Frost	Smooths PAR or flood washes of large areas. Useful for houselights; a good colour wash for evening events.	38.5	0.42	0.264	0.217
720# Durham Daylight Frost	Smooths PAR or flood washes of large areas. Useful for houselights; good for entrances from natural light.	32.3	0.49	0.216	0.209
717# Shanklin Frost	201 with frost to soften the beam of profile units.	37.6	0.43	0.227	0.225
718# Half Shanklin Frost	202 with frost to soften the beam of profile units.	56.3	0.25	0.263	0.270

Non-Flame Retardant product

coloured frosts

product	effect/colour	Transmission Y%	Absorption	Chromaticity x	Co-ordinates y
221 Blue Frost	Used for soft light effects with the addition of 218.	42.0	0.38	0.312	0.316
217# Blue Diffusion	As White Diffusion but with the addition of 218.	36.0	0.44	0.312	0.317
224# Daylight Blue Frost	Used for soft light effects with the addition of tungsten correction 201.	22.6	0.65	0.235	0.219
225# Neutral Density Frost	Used for soft light effects with the addition of 0.6 Neutral Density.	25.0	0.60	0.318	0.326

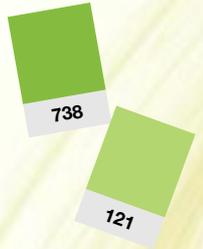
Non-Flame Retardant product

cosmetic range

product	effect/colour	Transmission Y%	Absorption	Chromaticity x	Co-ordinates y
186 Cosmetic Silver Rose	Pale tints complementary to key lighting.	59.7	0.22	0.323	0.308
185 Cosmetic Burgundy	Pale tints complementary to key lighting.	57.7	0.24	0.324	0.319
187 Cosmetic Rouge	Pale tints complementary to key lighting.	58.8	0.23	0.336	0.328
188 Cosmetic Highlight	Pale tints complementary to key lighting.	66.3	0.18	0.330	0.327
184 Cosmetic Peach	Pale tints complementary to key lighting.	58.6	0.23	0.328	0.328
189 Cosmetic Silver Moss	Pale tints complementary to key lighting.	71.7	0.15	0.327	0.347
190 Cosmetic Emerald	Pale tints complementary to key lighting.	67.1	0.17	0.307	0.327
191 Cosmetic Aqua Blue	Pale tints complementary to key lighting.	65.8	0.18	0.300	0.318

numerical listing

002	ROSE PINK	117	STEEL BLUE	187	COSMETIC ROUGE
003	LAVENDER TINT	118*	LIGHT BLUE	188	COSMETIC HIGHLIGHT
004*	MEDIUM BASTARD AMBER	119*	DARK BLUE	189	COSMETIC SILVER MOSS
007*	PALE YELLOW	120*	DEEP BLUE	190	COSMETIC EMERALD
008*	DARK SALMON	121*	LEE GREEN	191	COSMETIC AQUA BLUE
009*	PALE AMBER GOLD	122*	FERN GREEN	192	FLESH PINK
010*	MEDIUM YELLOW	124*	DARK GREEN	193	ROSY AMBER
013*	STRAW TINT	126	MAUVE	194	SURPRISE PINK
015*	DEEP STRAW	127	SMOKEY PINK	195*	ZENITH BLUE
017	SURPRISE PEACH	128	BRIGHT PINK	196	TRUE BLUE
019*	FIRE	129	HEAVY FROST	197*	ALICE BLUE
020*	MEDIUM AMBER	130	CLEAR	198	PALACE BLUE
021*	GOLD AMBER	131	MARINE BLUE	199	REGAL BLUE
022*	DARK AMBER	132*	MEDIUM BLUE	200	DOUBLE CT BLUE
024*	SCARLET	134	GOLDEN AMBER	201	FULL CT BLUE
025	SUNSET RED	135	DEEP GOLDEN AMBER	202	1/2 CT BLUE
026*	BRIGHT RED	136	PALE LAVENDER	203	1/4 CT BLUE
027*	MEDIUM RED	137	SPECIAL LAVENDER	204	FULL CT ORANGE
029	PLASA RED	138	PALE GREEN	205	1/2 CT ORANGE
035*	LIGHT PINK	139*	PRIMARY GREEN	206	1/4 CT ORANGE
036*	MEDIUM PINK	140	SUMMER BLUE	207	FULL CT ORANGE + .3 NEUTRAL DENSITY
039	PINK CARNATION	141*	BRIGHT BLUE	208	FULL CT ORANGE + .6 NEUTRAL DENSITY
046*	DARK MAGENTA	142	PALE VIOLET	209	.3 NEUTRAL DENSITY
048	ROSE PURPLE	143	PALE NAVY BLUE	210	.6 NEUTRAL DENSITY
049	MEDIUM PURPLE	144	NO COLOUR BLUE	211	.9 NEUTRAL DENSITY
052*	LIGHT LAVENDER	147	APRICOT	212	LCT YELLOW
053*	PALER LAVENDER	148	BRIGHT ROSE	213	WHITE FLAME GREEN
058*	LAVENDER	151	GOLD TINT	214	FULL TOUGH SPUN
061*	MIST BLUE	152	PALE GOLD	215	1/2 TOUGH SPUN
063*	PALE BLUE	153	PALE SALMON	216	WHITE DIFFUSION
068	SKY BLUE	154	PALE ROSE	217	BLUE DIFFUSION
071*	TOKYO BLUE	156	CHOCOLATE	218	1/8 CT BLUE
075	EVENING BLUE	157	PINK	219	LEE FLUORESCENT GREEN
079*	JUST BLUE	158	DEEP ORANGE	220	WHITE FROST
085*	DEEPER BLUE	159	NO COLOUR STRAW	221	BLUE FROST
088	LIME GREEN	161	SLATE BLUE	223	1/8 CT ORANGE
089*	MOSS GREEN	162	BASTARD AMBER	224	DAYLIGHT BLUE FROST
090*	DARK YELLOW GREEN	164	FLAME RED	225	LEE N.D. FROST
100	SPRING YELLOW	165	DAYLIGHT BLUE	226	LEE U.V.
101	YELLOW	166	PALE RED	228	BRUSHED SILK
102	LIGHT AMBER	169	LILAC TINT	229	1/4 TOUGH SPUN
103	STRAW	170	DEEP LAVENDER	230	SUPER CORRECTION LCT YELLOW
104	DEEP AMBER	172*	LAGOON BLUE	232	SUPER WHITE FLAME GREEN
105	ORANGE	174	DARK STEEL BLUE	236	H.M.I (TO TUNGSTEN)
106	PRIMARY RED	176	LOVING AMBER	237	C.I.D. (TO TUNGSTEN)
107	LIGHT ROSE	179	CHROME ORANGE	238	C.S.I. (TO TUNGSTEN)
108	ENGLISH ROSE	180	DARK LAVENDER	239	POLARISER
109	LIGHT SALMON	181*	CONGO BLUE	241	LEE FLUORESCENT 5700 K
110	MIDDLE ROSE	182	LIGHT RED	242	LEE FLUORESCENT 4300 K
111	DARK PINK	183	MOONLIGHT BLUE	243	LEE FLUORESCENT 3600 K
113	MAGENTA	184	COSMETIC PEACH		
115*	PEACOCK BLUE	185	COSMETIC BURGUNDY		
116*	MEDIUM BLUE-GREEN	186	COSMETIC SILVER ROSE		





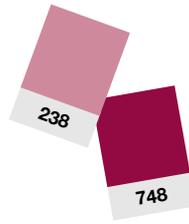
244 LEE PLUS GREEN
 245 1/2 PLUS GREEN
 246 1/4 PLUS GREEN
 247 LEE MINUS GREEN
 248 1/2 MINUS GREEN
 249 1/4 MINUS GREEN
 250 1/2 WHITE DIFFUSION
 251 1/4 WHITE DIFFUSION
 252 1/8 WHITE DIFFUSION
 253 HAMPSHIRE FROST
 254** NEW HAMPSHIRE FROST
 255 HOLLYWOOD FROST
 256 1/2 HAMPSHIRE FROST
 257 1/4 HAMPSHIRE FROST
 258 1/8 HAMPSHIRE FROST
 261 TOUGH SPUN FR - FULL
 262 TOUGH SPUN FR - 3/4
 263 TOUGH SPUN FR - 1/2
 264 TOUGH SPUN FR - 3/8
 265 TOUGH SPUN FR - 1/4
 269 LEE HEAT SHIELD
 270 LEE SCRIM
 271 MIRROR SILVER
 272 SOFT GOLD REFLECTOR
 273 SOFT SILVER REFLECTOR
 274 MIRROR GOLD
 275 BLACK SCRIM
 278 1/8 PLUS GREEN
 279 1/8 MINUS GREEN
 280 BLACK FOIL
 281 3/4 CT BLUE
 285 3/4 CT ORANGE
 298 .15 NEUTRAL DENSITY
 299 1.2 NEUTRAL DENSITY
 322 SOFT GREEN
 323 JADE
 325 MALLARD GREEN
 327 FOREST GREEN
 328 FOLLIES PINK
 332 SPECIAL ROSE PINK
 341 PLUM
 343 SPECIAL MEDIUM LAVENDER
 344 VIOLET
 345 FUCHSIA PINK
 352 GLACIER BLUE
 353 LIGHTER BLUE
 354 SPECIAL STEEL BLUE
 363* SPECIAL MEDIUM BLUE
 366 CORNFLOWER
 400 LEELUX
 402 SOFT FROST
 404 HALF SOFT FROST

410 OPAL FROST
 413 HALF HIGHLIGHT
 414 HIGHLIGHT
 416 3/4 WHITE DIFFUSION
 420 LIGHT OPAL FROST
 429 QUIET FROST
 430 GRID CLOTH
 432 LIGHT GRID CLOTH
 434 1/4 GRID CLOTH
 441 FULL CT STRAW
 442 1/2 CT STRAW
 443 1/4 CT STRAW
 444 1/8 CT STRAW
 450 3/8 WHITE DIFFUSION
 452 1/16 WHITE DIFFUSION
 460 QUIET GRID CLOTH
 462 QUIET LIGHT GRID CLOTH
 464 QUIET 1/4 GRID CLOTH
 701 PROVENCE
 702 SPECIAL PALE LAVENDER
 704 LILY
 705 LILY FROST
 706 KING FALS LAVENDER
 707* ULTIMATE VIOLET
 708 COOL LAVENDER
 709 ELECTRIC LILAC
 710 SPIR SPECIAL BLUE
 711 COLD BLUE
 712 BEDFORD BLUE
 713* J.WINTER BLUE
 714 ELYSIAN BLUE
 715* CABANA BLUE
 716* MIKKEL BLUE
 717 SHANKLIN FROST
 718 HALF SHANKLIN FROST
 719 COLOUR WASH BLUE
 720 DURHAM DAYLIGHT FROST
 721* BERRY BLUE
 722 BRAY BLUE
 723 VIRGIN BLUE
 724 OCEAN BLUE
 725 OLD STEEL BLUE
 728 STEEL GREEN
 729* SCUBA BLUE
 730 LIBERTY GREEN
 735 VELVET GREEN
 736 TWICKENHAM GREEN
 738* JAS GREEN
 740 AURORA BOREALIS GREEN
 741 MUSTARD YELLOW
 744 DIRTY WHITE
 746 BROWN
 747 EASY WHITE

748 SEEDY PINK
 749 HAMPSHIRE ROSE
 750 DURHAM FROST
 763 WHEAT
 764 SUN COLOUR STRAW
 765 LEE YELLOW
 767 OKLAHOMA YELLOW
 770 BURNT YELLOW
 773 CARDBOX AMBER
 774 SOFT AMBER KEY 1
 775 SOFT AMBER KEY 2
 776 NECTARINE
 777 RUST
 778* MILLENNIUM GOLD
 779 BASTARD PINK
 781 TERRY RED
 787 MARIUS RED
 789 BLOOD RED
 790 MOROCCAN PINK
 791 MOROCCAN FROST
 793 VANITY FAIR
 794 PRETTY 'N PINK
 795 MAGICAL MAGENTA
 797* DEEP PURPLE
 798 CHRYSALIS PINK
 799 SPECIAL KH LAVENDER



technical filters



The LEE range of technical filters has been developed to accurately convert and manipulate light sources with a high degree of accuracy for technical situations. A full range of daylight, tungsten and fluorescent conversions, neutral densities, diffusers, reflectors and scrims, are all available in a variety of sizes and materials to suit the required job.

■ *A touch of art, a lot of science.*

■ Conversion Chart	29
■ Conversion Filters	30
■ Acrylic Panels	31
■ Correction Filters	32
■ Reflection Media	33
■ Protection Media	33
■ Diffusion Media	34



■ *In addition to our broad range of lighting filter, we also produce the highest quality camera filters in both resin and polyester.*

conversion chart

How to use

Simply draw a line from the Colour Temperature value of your Original Light Source, to that of the required Source. Where the line crosses the central band, read off the Mired Shift value. For your convenience we have added both our Lighting and Camera Filters at their appropriate positions in relation to the Mired Shift Scale. The Lighting Filters are positioned on the left of the Mired Shift Scale, whilst the Camera Filters are on the right.

Example 1 (Lighting Filter)

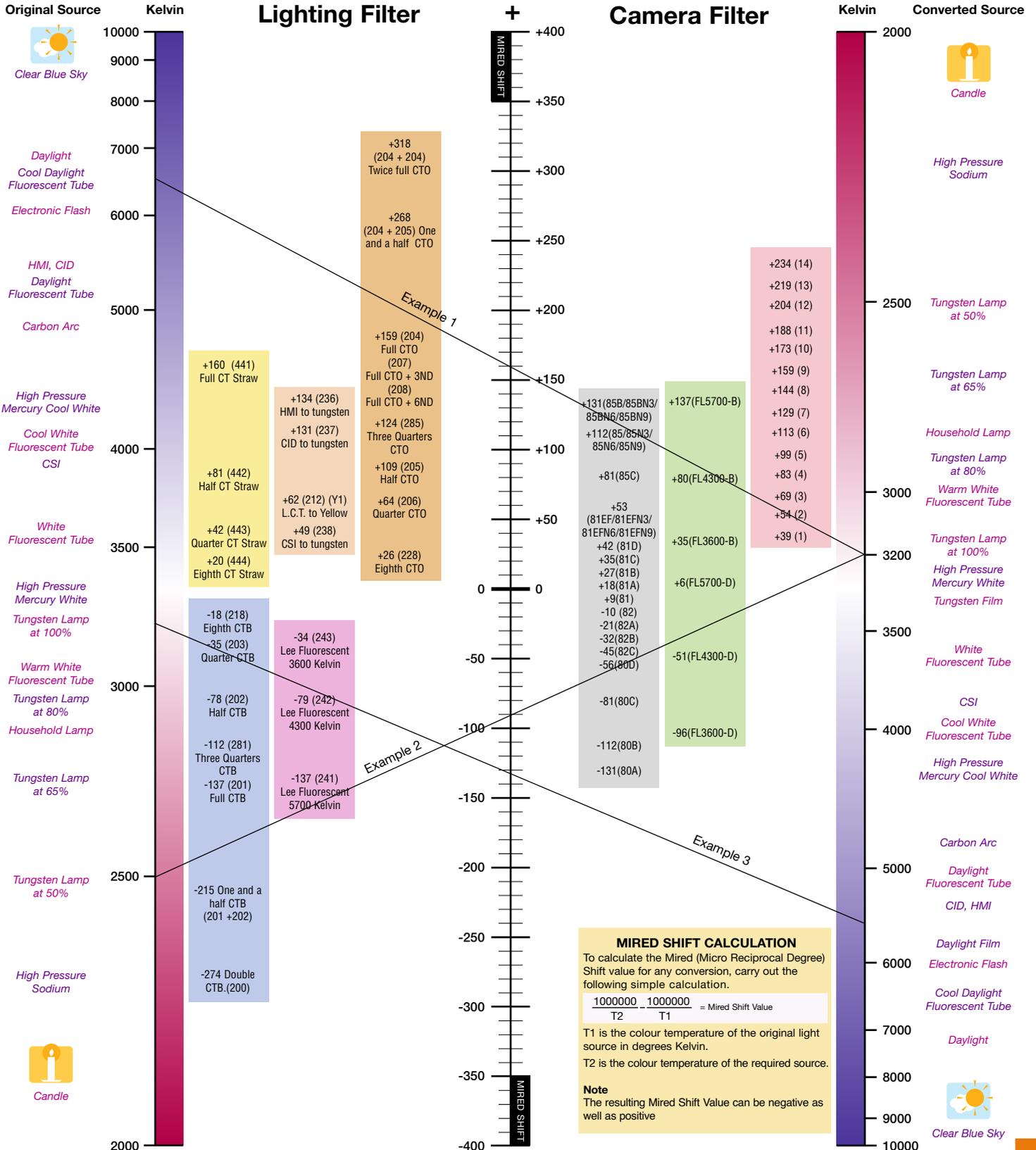
To convert an original source of 6500K to 3200K. The line has been drawn as an example. You will note that it crosses the central band at just over +150 Mired Shift. This indicates that the Filter required is 204 Full CTO (also available with two degrees of Neutral Density).

Example 2 (Lighting Filter)

To convert an original source of 2500K to 3200K. You will note that the line crosses the central band at -90 Mired Shift. In this example the nearest filter is a 202 Half CTB with a Mired Shift of -78. To achieve the desired mired shift of -90 a combination of two filters can be used. 202 Half CTB (-78 Mired Shift) and 218 Eighth CTB (-18 Mired Shift). Combining these two filters together will give a total Mired Shift of -96 (which in most cases would be acceptable).

Example 3 (Camera Filter)

To convert an original source of 3250K (tungsten light) to 5600k (daylight film) you can see that the line crosses the central band at -130 mired shift. This indicates that the camera filter required is an 80A (-131 Mired Shift).



MIRED SHIFT CALCULATION

To calculate the Mired (Micro Reciprocal Degree) Shift value for any conversion, carry out the following simple calculation.

$$\frac{1000000}{T_2} - \frac{1000000}{T_1} = \text{Mired Shift Value}$$

T1 is the colour temperature of the original light source in degrees Kelvin.
T2 is the colour temperature of the required source.

Note
The resulting Mired Shift Value can be negative as well as positive

- C. T. Straws
- Arc Correction
- Daylight Conversion
- Fluorescent Light Conversion
- Tungsten Light Conversion
- Tungsten to Fluorescent Conversion
- Colour Temperature Adjustment inc Neutral Density
- Coral

product

description

Kelvin

Mired
Shift

Transmission
Y%

Absorption

Chromaticity
x

Co-ordinates
y

(Measured to source C, Correlated Colour Temperature of 6774K)

Tungsten Light Conversion

200	Double CTB	Converts Tungsten to Daylight.	3200K to 26000K approx	-274	16.2	0.79	0.179	0.155
201	Full CTB	Converts Tungsten to Photographic Daylight.	3200K to 5700K	-137	34.0	0.47	0.228	0.233
281	Threequarters CTB	Converts Tungsten to Daylight.	3200K to 5000K	-112	45.5	0.35	0.239	0.258
202	Half CTB	Converts Tungsten to Daylight.	3200K to 4300K	-78	54.9	0.26	0.261	0.273
203	Quarter CTB	Converts Tungsten to Daylight.	3200K to 3600K	-35	69.2	0.16	0.285	0.294
218	Eighth CTB	Converts Tungsten to Daylight.	3200K to 3400K	-18	81.3	0.09	0.299	0.307

Daylight Conversion

204	Full CTO	Converts Daylight to Tungsten Light.	6500K to 3200K	+159	55.4	0.26	0.437	0.392
285	Threequarters CTO	Converts Daylight to Tungsten Light.	6500K to 3600K	+124	61.3	0.21	0.400	0.387
205	Half CTO	Converts Daylight to Tungsten Light.	6500K to 3800K	+109	70.8	0.15	0.374	0.364
206	Quarter CTO	Converts Daylight to Tungsten Light.	6500K to 4600K	+64	79.1	0.10	0.346	0.346
223	Eighth CTO	Converts Daylight to Tungsten Light.	6500K to 5550K	+26	85.2	0.07	0.328	0.332
207	Full CTO +.3ND	Converts Daylight to Tungsten and reduces light 1 Stop.	6500K to 3200K	+159	32.5	0.49	0.435	0.386
208	Full CTO +.6ND	Converts Daylight to Tungsten and reduces light 2 Stops.	6500K to 3200K	+159	15.6	0.81	0.442	0.394
441	Full CT Straw	Converts Daylight to Tungsten Light with yellow bias.	6500K to 3200K	+160	57.3	0.24	0.426	0.407
442	Half CT Straw	Converts Daylight to Tungsten Light with yellow bias.	6500K to 4300K	+81	71.2	0.15	0.370	0.378
443	Quarter CT Straw	Converts Daylight to Tungsten Light with yellow bias.	6500K to 5100K	+42	79.8	0.10	0.338	0.349
444	Eighth CT Straw	Converts Daylight to Tungsten Light with yellow bias.	6500K to 5700K	+20	83.1	0.08	0.323	0.332

Neutral Density

298	.15ND	Reduces light 1/2 Stop, without changing colour.			70.2	0.15	0.311	0.319
209	.3ND	Reduces light 1 Stop, without changing colour.			50.0	0.30	0.310	0.319
210	.6ND	Reduces light 2 Stops, without changing colour.			25.0	0.60	0.308	0.317
211	.9ND	Reduces light 3 Stops, without changing colour.			12.3	0.90	0.310	0.322
299	1.2ND	Reduces light 4 Stops, without changing colour.			6.3	1.18	0.308	0.315

product	description		Mired Shift	Transmission Y%	Absorption	Stop Value	Note
Polariser							
239	Polariser	Made from 0.006" (150 micron) Triacetate. Reduces glare and reflection. Use with LEE Polarising Camera Filter.	+19	50.0	0.3	1	single sheet
				38.0	0.42	1 1/3	Axis uncrossed (double sheet)
				<.05	>3	>10	Axis crossed (double sheet)

acrylic panels

These panels are manufactured specifically for LEE and exhibit the same degrees of colour accuracy and consistency as our range of lighting filters.

Specifically for use over windows for correcting daylight, these hardwearing panels can be cut to size and installed permanently, or used on location again and again.

The panels are available in a range of Colour Temperature Oranges and Neutral Densities, including combinations that are unique to LEE Filters.

The panels are available in two sizes:

Size	Thickness	Weight	Note
2.44m x 1.22m (8' x 4')	3mm (1/8")	9.6kg (21lbs)	All panels available in this size
2.44m x 1.52m (8' x 5')	3mm (1/8")	12kg (26.5lbs)	Only A204, A209, A210 & A211 available in this size

product	description		Mired Shift	Transmission Y%
Daylight Conversion				
A204	Full CTO	Converts Daylight to Tungsten Light.	+175	57.2
A205	Half CTO	Converts Daylight to Tungsten Light.	+90	72.6
A207	Full CTO + .3ND	Converts Daylight to Tungsten and reduces light 1 Stop.	+175	30.2
A208	Full CTO + .6ND	Converts Daylight to Tungsten and reduces light 2 Stops.	+175	13.8
Neutral Density				
A209	.3ND	Reduces light 1 Stop, without changing colour.	0	48.0
A210	.6ND	Reduces light 2 Stops, without changing colour.	0	22.2
A211	.9ND	Reduces light 3 Stops, without changing colour.	0	13.1

Fluorescent Correction System

241	LEE Fluorescent 5700 Kelvin	Converts Tungsten to Fluorescent light of 5700K (cool white/daylight).	27.4	0.56	0.231	0.290
242	LEE Fluorescent 4300 Kelvin	Converts Tungsten to Fluorescent light of 4300K (white).	37.3	0.43	0.262	0.346
243	LEE Fluorescent 3600 Kelvin	Converts Tungsten to Fluorescent light of 3600K (warm white).	45.7	0.34	0.286	0.370
219	LEE Fluorescent Green	General Tungsten to Fluorescent correction for use when colour temperature is unknown.	31.0	0.51	0.219	0.334

The above correction filters are to be used in conjunction with an appropriate LEE FL-B Fluorescent to Tungsten or LEE FL-D Fluorescent to Daylight camera filter.

Plus Green - Used on Daylight and Tungsten light sources to provide green cast when used in conjunction with discharge lighting.

244	LEE Plus Green	Approximately equivalent to CC30 Green camera filter.	74.2	0.12	0.324	0.388
245	Half Plus Green	Approximately equivalent to CC15 Green camera filter.	81.7	0.08	0.319	0.355
246	Quarter Plus Green	Approximately equivalent to CC075 Green camera filter.	84.6	0.07	0.315	0.337
278	Eighth Plus Green	Provides very slight green cast.	87.7	0.06	0.313	0.327

The above correction filters are to be used in conjunction with an appropriate LEE FL-B Fluorescent to Tungsten or LEE FL-D Fluorescent to Daylight camera filter.

Minus Green - Used on lighting to eliminate unwanted green cast created by discharge light sources on film.

247	LEE Minus Green	Approximately equivalent to CC30 Magenta camera filter.	57.8	0.22	0.325	0.279
248	Half Minus Green	Approximately equivalent to CC15 Magenta camera filter.	72.0	0.14	0.317	0.297
249	Quarter Minus Green	Approximately equivalent to CC075 Magenta camera filter.	82.4	0.08	0.312	0.307
279	Eighth Minus Green	Provides very slight correction.	86.5	0.06	0.312	0.311

Ultra Violet Absorption

226	LEE UV	Transmission of less than 50% at 410nms.	91.5	0.04	0.314	0.321
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Arc Correction (Compact Source)

236	HMI (to Tungsten)	Converts HMI to 3200K, for use with Tungsten film.	58.2	0.24	0.426	0.376
237	CID (to Tungsten)	Converts CID to 3200K, for use with Tungsten film.	38.5	0.41	0.430	0.365
238	CSI (to Tungsten)	Converts CSI to 3200K, for use with Tungsten film.	29.8	0.53	0.372	0.331

Arc Correction (Carbon-Colour Balanced)

230	Super Correction LCT Yellow	Converts Yellow carbon arc (of low colour temperature) to Tungsten.	41.9	0.38	0.367	0.368
232	Super Correction W.F. Green to Tungsten	Converts White Flame arc to 3200K, for use with Tungsten film.	37.4	0.43	0.423	0.385

product description

Transmission Absorption Chromaticity Co-ordinates
 Y% x y
 (Measured to source C, Correlated Colour Temperature of 6774K)

Arc Correction (Carbon-Regular)

212	LCT Yellow (Y1)	Reduces Colour Temperature of low carbon arcs to 3200K	88.7	0.05	0.340	0.363
213	White Flame Green	Corrects White Flame Carbon arcs by absorbing ultra violet	80.0	0.10	0.317	0.359



product description special note

Reflector

271	Mirror Silver	Produces hard reflection. White backed.	Available in 6.10m x 1.52m (20'x60") rolls			
272	Soft Gold Reflector	Produces soft reflection. White backed. Mired Shift +45.	Available in 6.10m x 1.52m (20'x60") rolls			
273	Soft Silver Reflector	Produces soft reflection. White backed.	Available in 6.10m x 1.52m (20'x60") rolls			
274	Mirror Gold	Produces hard reflection. White backed. Mired Shift +45.	Available in 6.10m x 1.52m (20'x60") rolls			

Scrim

270	LEE Scrim	Perforated reflector producing a very soft reflection. Silver on one side and black on reverse.	Stop value 1½ when used as a filter, Transmission 36%.			
275	Black Scrim	A flexible perforated material that is black on both sides. Can be used on windows to reduce light intensity, without causing any unwanted reflections.	Stop value 1½ when used as a filter, Transmission 36%.			



product description

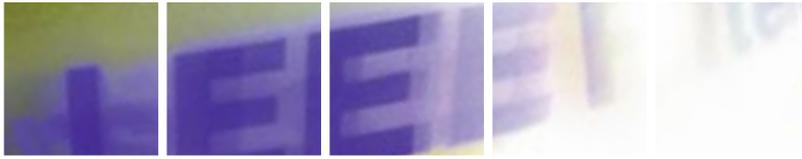
Transmission Absorption Chromaticity Co-ordinates
 Y% x y
 (Measured to source C, Correlated Colour Temperature of 6774K)

Heat Shield

269	LEE Heat Shield	A transparent flexible film used to extend the life of a filter. The shield should be placed between the light source and the filter allowing distance between the shield and the filter. Air should be allowed to circulate freely around the LEE Heat Shield.	91.0	0.04	0.311	0.317
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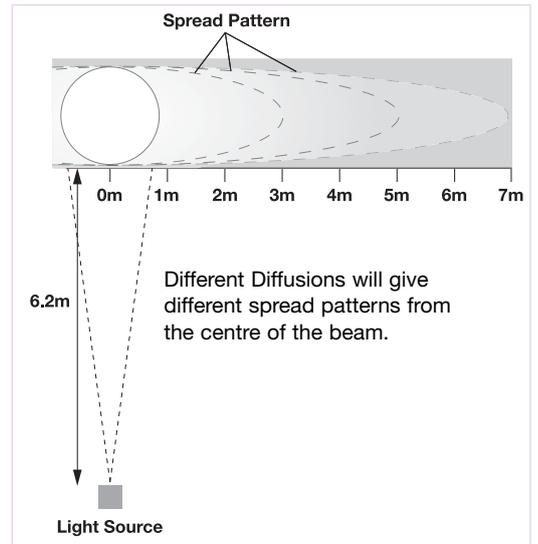
Foil

280	Black Foil	Used to reduce unwanted light spill or to control unwanted light reflection.	Available in two roll sizes 7.62m x 0.61m (25' x 24") 15.24m x 0.30m (50' x 12")			
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The illustrations on these two pages show how a light beam softens when using different types of diffusion media i.e. Diffusions, Frosts, Flexi-Frosts, Grid Cloths and Spuns.

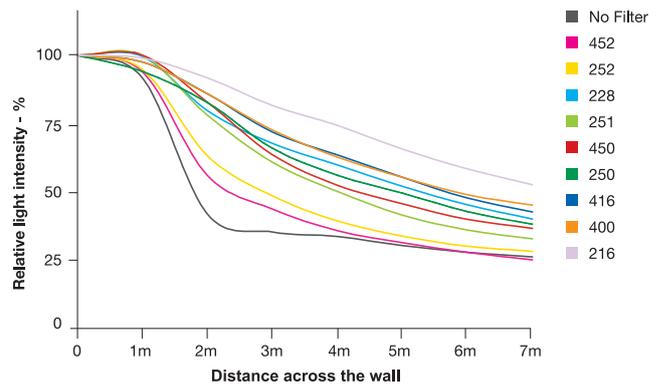
A focused follow spot luminaire, 6.2m from a wall was used to obtain the information represented here. Light intensity readings were taken horizontally across the wall from the centre of the beam. The information shown should only be used for comparing the relative light spread of each of the different filters.



% T Stop Value Non/Flame ILLUSTRATIONS

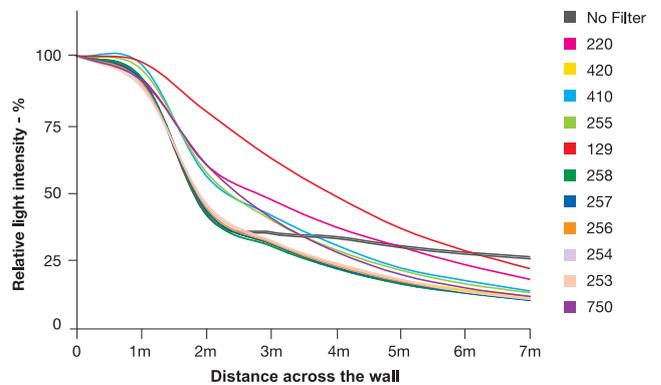
DIFFUSIONS - Spreads the projected beam of light over the subject, some loss of light will possibly be seen. The greater the diffusion, the greater and more even the resultant spread of light. Shadows are reduced. Used to smooth out beam scallops when lighting cycloramas or in tight spaces.

	% T	Stop Value	Non/Flame	ILLUSTRATIONS
No Filter				
452 Sixteenth White Diffusion	>85	<1/4	NFR	
252 Eighth White Diffusion	>85	<1/4	NFR	
228 Brushed Silk	60	3/4	NFR	
251 Quarter White Diffusion	80	1/3	NFR	
450 Three Eighth White Diffusion	63	2/3	NFR	
250 Half White Diffusion	60	3/4	NFR	
416 Three Quarter White Diffusion	50	1	NFR	
400 LEELux	36	1 1/2	NFR	
216 White Diffusion	36	1 1/2	NFR	



FROSTS - Frost is used for a variety of applications offering low to medium diffusion to a beam of light while maintaining the shape and beam center.

	% T	Stop Value	Non/Flame	ILLUSTRATIONS
No Filter				
220 White Frost	39	1 1/3	FR	
420 Light Opal Frost	>85	<1/4	NFR	
410 Opal Frost	71	1/2	NFR	
255 Hollywood Frost	83	<1/3	NFR	
129 Heavy Frost	25	2	FR	
258 Eighth Hampshire Frost	>85	<1/4	NFR	
257 Quarter Hampshire Frost	>85	<1/4	NFR	
256 Half Hampshire Frost	>85	<1/4	NFR	
254 New Hampshire Frost	>85	<1/4	FR	
253 Hampshire Frost	>85	<1/4	NFR	
750 Durham Frost	>85	<1/4	NFR	

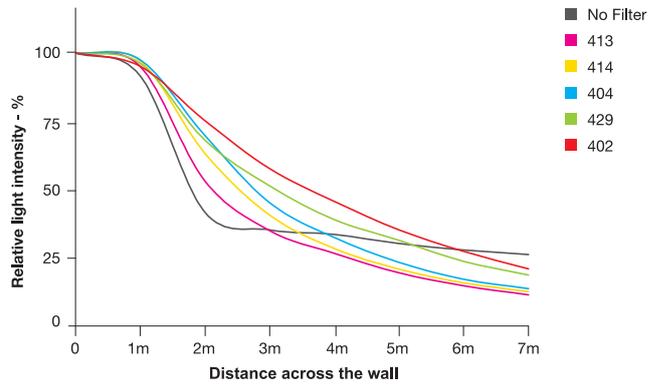




% T Stop Value Non/ Flame ILLUSTRATIONS

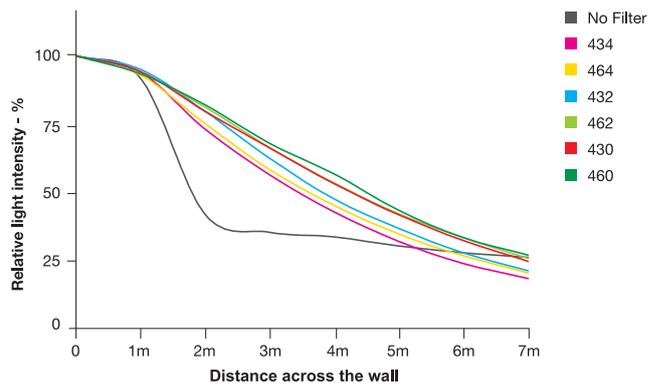
FLEXI FROSTS - Soft, quite and pliable frosts which can be sewn for use on large frames. Waterproof, durable and thick makes them perfect for windy and rainy weather conditions.

No Filter				
413 Half Highlight	84	1/4	FR	
414 Highlight	40	1 1/3	FR	
404 Half Soft Frost	36	1 1/2	FR	
429 Quiet Frost	18	2 1/2	FR	
402 Soft Frost	12	3	FR	



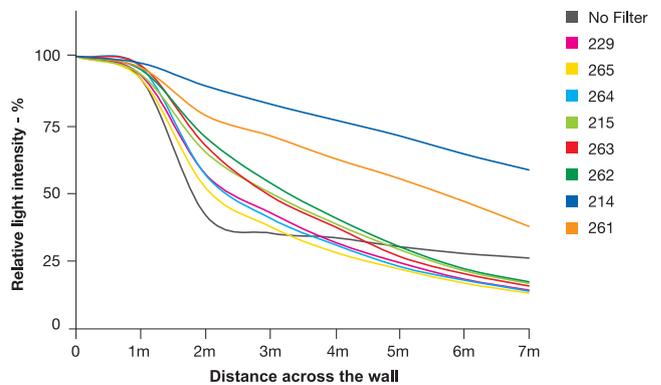
GRID CLOTHS - A reinforced material containing diffusion properties ranging from medium to dense. Grid cloth creates the effect of a shadowless beam of light.

No Filter				
434 Quarter Grid Cloth	60	3/4	NFR	
464 Quiet Quarter Grid Cloth	47.5	1	NFR	
432 Light Grid Cloth	30	1 3/4	NFR	
462 Quiet Light Grid Cloth	22.5	2 1/4	NFR	
430 Grid Cloth	18	2 1/2	NFR	
460 Quiet Grid Cloth	15	2 3/4	NFR	



SPUNS - Creates an overall diffusion, softens shadows and leaves beam intact.

No Filter				
229 Quarter Tough Spun	60	3/4	NFR	
265 Tough Spun FR - 1/4	60	3/4	FR	
264 Tough Spun FR - 3/8	50	1	FR	
215 Half Tough Spun	36	1 1/2	NFR	
263 Tough Spun FR - 1/2	41	1 1/3	FR	
262 Tough Spun FR - 3/4	32	1 2/3	FR	
214 Full Tough Spun	18	2 1/2	NFR	
261 Tough Spun FR - Full	25	2	FR	



product	description	Transmission %	Stop value	Special Notes
Non-Flame Retardant Frost				
410 Opal Frost	Used for softening spotlight beam edges without altering shape (23 micron polyester base).	71	1/2	
420 Light Opal Frost	Similar characteristics to Opal Frost, but less diffuse (36 micron polyester base).	>85	<1/4	
258 Eighth Hampshire Frost	Extra Light frost effect.	>85	<1/4	
257 Quarter Hampshire Frost	Extra Light frost effect.	>85	<1/4	
256 Half Hampshire Frost	Extra Light frost effect.	>85	<1/4	
253 Hampshire Frost	Light frost effect.	>85	<1/4	
255 Hollywood Frost	Light frost effect - softens edges.	83	<1/3	
750 Durham Frost	A frost that almost completely softens shutter edges and removes hot spots.	>85	<1/4	
720 Durham Daylight Frost	Smooths PAR or flood washes of large areas. Useful for houselights; good for entrances from natural light.	32.3	1 ² / ₃	Full CT Blue
717 Shanklin Frost	201 with frost to soften the beam of profile units.	37	1 ¹ / ₂	Full CT Blue
718 Half Shanklin Frost	202 with frost to soften the beam of profile units.	56	3/4	Half CT Blue
705 Lily Frost	Smooths PAR or flood washes of large areas. Useful for houselights; a good colour wash for evening events.	38	1 1/3	Colour = 704
791 Moroccan Frost	Smooths PAR or flood washes of large areas. Useful for houselights; good for interior colour washes.	57	3/4	Colour = 790
749 Hampshire Rose	Combines flesh tone warmer 154 with some Hampshire Frost.	74	1/2	Colour = 154
224 Daylight Blue Frost	Used for soft light effects with the addition of tungsten correction 201.	22	2 ¹ / ₄	Full CT Blue
225 Neutral Density Frost	Used for soft light effects with the addition of 0.6 Neutral Density.	25	2	.6 Neutral Density

Grid Cloth

430 Grid Cloth		18	2 ¹ / ₂	
432 Light Grid Cloth	A waterproof textile/fabric diffusion that is reinforced to allow it to be sewn or grommetted - ideal for attaching to large frames. Comes in three weights.	30	1 ³ / ₄	Rolls only 1.37m x 7.62m (54" x 25')
434 Quarter Grid Cloth		60	3/4	
460 Quiet Grid Cloth		15	2 ³ / ₄	
462 Quiet Light Grid Cloth	A textile/fabric diffusion that is reinforced to allow it to be sewn or grommetted - ideal for attaching to large frames, but that is quiet when used in windy conditions outdoors. Comes in three weights.	22.5	2 ¹ / ₄	Rolls only 1.37m x 7.62m (54" x 25')
464 Quiet Quarter Grid Cloth		47.5	1	



product

description

Transmission % Stop value

Special Notes

Non-Flame Retardant Diffusion

product	description	Transmission %	Stop value	Special Notes
216	White Diffusion	36	1 1/2	Rolls also available in 1.52m (60") width
416	Three Quarter White Diffusion	50	1	
250	Half White Diffusion	60	3/4	Rolls also available in 1.52m (60") width
450	Three Eighth White Diffusion	63	2/3	
251	Quarter White Diffusion	80	1/3	Rolls also available in 1.52m (60") width
252	Eighth White Diffusion	>85	<1/4	
452	Sixteenth White Diffusion	>85	<1/4	
400	LEELux	36	1 1/2	
217	Blue Diffusion	36	1 1/2	1/8 CT Blue
228	Brushed Silk	60	3/4	

Tough Spun

214	Full Tough Spun	18	2 1/2	
215	Half Tough Spun	36	1 1/2	Rolls only 7.62 x 1.22m (25' x 48")
229	Quarter Tough Spun	60	3/4	

product	description	Transmission %	Stop value	Special Notes
Flame Retardant Frost				
129 Heavy Frost	Strong diffuser, eliminates nearly all shadows.	25	2	
220 White Frost	Used for soft light effects.	39	1 ¹ / ₃	
221 Blue Frost	Used for soft light effects with the addition of 218.	42	1 ¹ / ₃	1/8 CT Blue
254 New Hampshire Frost	Used to soften the edges of spotlight beams, and to reduce the blue fringe.	>85	<1/4	HT only (For sizes see p10-11)
774 Soft Amber Key 1	Used for producing a warm key light colour.	71	1/2	
775 Soft Amber Key 2	Used for producing a warm key light colour.	58	3/4	

Flexi Frosts

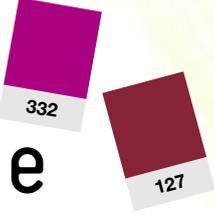
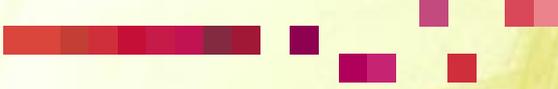
402 Soft Frost	A strong diffuser that creates a wide field of soft illumination but is very pliable to handle. Diffusion characteristics similar to 216, falls between 216 and 129.	12.0	3	Thickness 100 microns (4 thou)
429 Quiet Frost	A strong diffuser that creates a wide field of soft illumination but is thicker than the 402 product. Diffusion characteristics similar to 416.	18.4	2 ¹ / ₂	Thickness 325 microns (13 thou)
404 Half Soft Frost	A useful diffuser without too much light loss but very pliable to handle. Diffusion characteristics fall between 251 and 252.	36.2	1 ¹ / ₂	Thickness 100 microns (4 thou)
414 Highlight	A useful diffuser without too much light loss in a thick format. Diffusion characteristics similar to 252.	39.6	1 ¹ / ₃	Thickness 300 microns (12 thou)
413 Half Highlight	A strong frost effect that completely softens the edges of a spotlight beam. Diffusion characteristics similar to 750, falls between 750 and 253.	84.1	1/4	Thickness 300 microns (12 thou)

Advantages of this material are the large roll width; lack of noise when handled or used in windy conditions; waterproof for use outdoors, can be sewn or grommetted together for use on large frames; flame retardant.

1.52m width, 6.10m length, (60" x 20')

Tough Spun

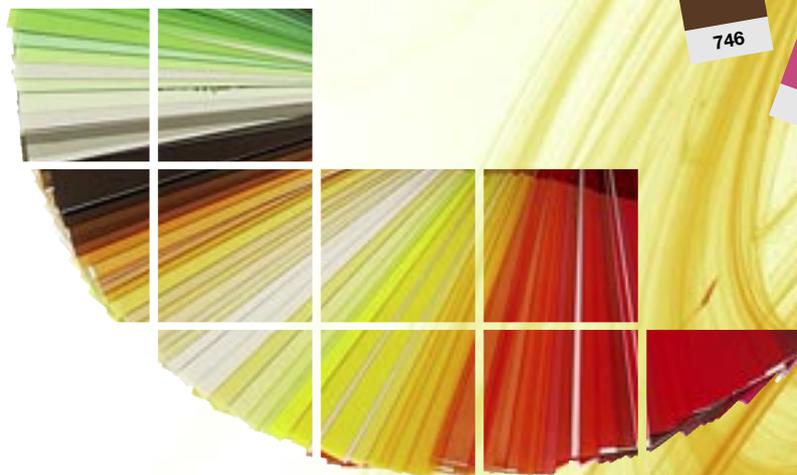
261 Tough Spun FR - Full		25	2	
262 Tough Spun FR - 3/4		32	1 ² / ₃	
263 Tough Spun FR - 1/2	Non yellowing flame retardant spun polyester material in five densities to give better light control.	41	1 ¹ / ₃	Rolls only 7.62 x 1.22m (25' x 4')
264 Tough Spun FR - 3/8		50	1	
265 Tough Spun FR - 1/4		60	3/4	



the architectural series



Building on our experience in film and theatrical lighting, LEE Filters have introduced a range of lighting filter products specifically designed for use in the entertainment, leisure and architectural industries.



fluorescent sleeves



T5 Sleeves

T8 Sleeves

T12 Sleeves

Get creative with fluorescent lighting! With over 200 colours to choose from, LEE Filters Fluorescent Coloured Sleeves offer the designer more choice than ever for both interior and exterior lighting projects.

You can choose any of the colours from our extensive colour range. See pages 16-25 or the booklet at the back of the brochure to view the range. A swatch book containing all the colours is also available on request.

Pre-Assembled Sleeves

You choose the colour and leave the rest to us. Your chosen colour is inserted into a clear sleeve and delivered ready to install.

The sleeves are made from a thermally stable, electrically insulating, polycarbonate. The ends of each sleeve have a clear end cap; these end caps fix the sleeve to the fluorescent tube making installation easy.

The sleeves are available in standard lengths 0.61m (24"), 1.22m (48"), 1.53m (60") and 2.44m (96") for T5, T8 and T12 diameter tubes. Custom sizes are also available on request.

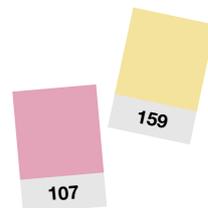
Self-assembly

Alternatively LEE Filters can supply pre-cut Quick Rolls of your chosen colour along with clear polycarbonate sleeves enabling self assembly of the inserts and sleeves.

The pre-cut Quick Rolls are 7.62m (25') long and are available for T5, T8 and T12 diameter sleeves.

Extend the life of coloured inserts by adding LEE UV into a T8 or T12 tube.

Coloured Sleeves used with diffusion create a smooth wallwash.

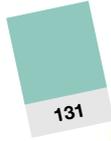


Neutral Density filters used in fluorescent tubes will reduce light where intensity is an issue.



LEE Filters Dichroic Glass is not tempered.

the glass series



Dichroic Glass Colours

Specifically designed to meet the demands of the lighting industry, LEE Filters dichroic glass filters are produced by the vacuum deposition of layers of thin metal films onto a substrate of borofloat glass. The glass is available in a thickness of 3.3mm and 1.7mm, and the production process creates spectacularly clear and pure colours. The glass filters will not fade and should withstand temperatures up to 371°C.

Professional Colours

Chosen after extensive research among design professionals, the Glass Series colour palette provides a range of 39 consistent, repeatable colours. This includes subtle, less saturated tones suitable for architectural use. Building on our expertise in film and theatre lighting, LEE has closely matched the glass series on polyester lighting filter material to provide a convenient swatch reference book. Available on request, lighting professionals can use this book to test colour schemes or demonstrate the effects of different filters.

Framed Glass

These lightweight aluminium frames, available both plain and in colour, suit all the popular lighting fixtures in the entertainment, architectural and theatrical industries. An innovative silicone gasket completely surrounds the glass, providing protection from both mechanical and thermal shock. A safety mesh can be added where required. Frames from 7.5cm (3") to 60cm (23.5") across can be designed in any shape.

Framed Glass

- 15.8cm (6.25") Source Four
- 19cm (7.5") Source Four PAR
- 25.4cm (10") PAR 64

Unframed Glass

- Unframed filters can be supplied for use in smaller light fittings with integral holders
- 4.99cm (1.96") MR16 and PAR 16 (circular)
 - 5cm (2") square
 - Custom sizes can be supplied - please ask for a quotation



LEE Filters offer a complete range of lighting filter products specifically designed for applications such as retail and entertainment, as well as both interior and exterior lighting projects.

No.	Name	No.	Name
○ R31	Amber Blush 1	● B06	Lagoon 6
○ R50	Red 0	● B14	Steel 4
● R99	Flame 9	● B24	Crystal Blue 4
○ O01	Sunset 1	● B44	Royal Blue 4
● O08	Sunset 8	● B53	Blue 3
○ O14	Peach 4	● B64	Navy Blue 4
● O18	Peach 8	● B71	Cornflower 1
○ O32	Apricot 2	● B93	Congo 3
● O42	Nectarine 2	○ V10	Indigo 0
● O43	Nectarine 3	● V28	Blueberry 8
● O59	Orange 9	● V43	Violet 3
○ O80	Gold Amber 0	● V67	Rose Purple 7
○ O82	Gold Amber 2	● V74	Plum 4
● O89	Gold Amber 9	● V81	Lilac 1
● Y02	Wheat 2	● V98	Lavender 8
● G28	Lime 8	○ M31	Fuchsia 1
● G96	Jade 6	● M56	Magenta 6
● C04	Blue Green 4	● M63	Carnation Pink 3
○ C45	Turquoise 5	● M91	Salmon 1
○ C47	Turquoise 7		

Technical Filters

Name	Name
○ Full CT Blue	○ UV Blocker - Absorbs Ultra Violet light
○ Half CT Blue	○ Hot Mirror - Reflects heat back into the light source
● Full CT Orange	
● Half CT Orange	



*Lighting design by LIGHTFORM LLC



Unfrosted Glass



Frosted Glass

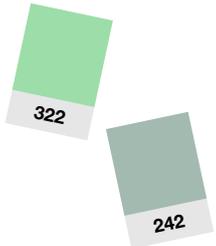
frosted dichroic glass colours

Twelve of the most popular colours within the glass series are also available as a range of Frosted Dichroic Glass filters, enabling the lighting designer to add colour and diffusion in the one filter. The diffusion within the filter softens the light beam giving a more even and graduated lighting effect.

Frosted Colour Dichroic Filters are colour-coated on one side by a vacuum deposition of metal film, and diffused on the other side.

The diffusion creates a frost very similar to LEE 251 Quarter White Diffusion when the frosted side is placed on the fixture outwards, away from the lamp. The dichroic coating should withstand temperatures up to 371°C, allowing the colour to be completely fade resistant throughout its life.

Frosted Dichroic Glass filters are available for MR16 and PAR 16 circular light fittings. Custom sizes are also available on request.

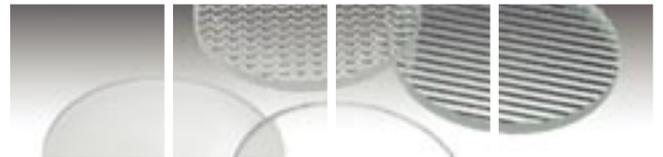


No. Name	No. Name
● B14 Steel 4	● M63 Carnation Pink 3
● B53 Blue 3	● O18 Peach 8
● B71 Cornflower 1	● O42 Nectarine 2
● B93 Congo 3	● O59 Orange 9
● V74 Plum 4	● Y02 Wheat 2
● V81 Lilac 1	● M91 Salmon 1

LEE Filters Dichroic glass is coated on one side. To determine which side is coated touch your finger to the flat surface of the filter. On the coated side the reflection will meet your finger. On the uncoated side there will be a space between your finger and the reflection.



MR16 / PAR 16 accessories

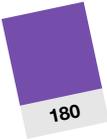


Designed for MR16 and PAR 16 fittings, the LEE Filters range of accessories offer a wide range of lighting effects and various diffusions.

The diagram opposite shows the diffusion effect created when using an 8°, 24° or 36° 50w MR16 bulb, at a distance of 92cm (3').

-  **Linear Diffusion**
-  **O80 Linear Diffusion**
Combined Linear Diffusion and warming filter
-  **Prismatic Diffusion**
-  **Softening Diffusion**
-  **Frosted Diffusion**

	8° Lamp	24° Lamp	36° Lamp
No Filter			
Linear Diffusion (Vertical)			
Linear Diffusion (Horizontal)			
Prismatic Diffusion			
Softening Diffusion			
Frosted Diffusion			

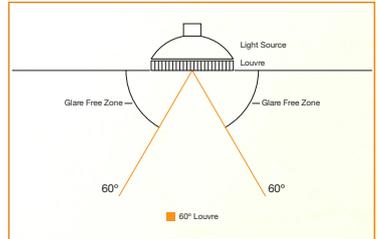
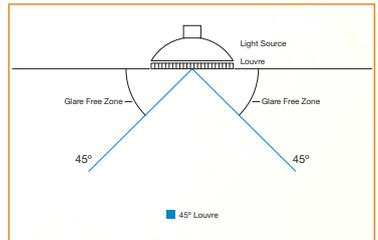
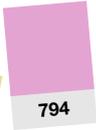


MR16 / PAR 16 holders and Louvres



Attach filters directly to an MR16 or PAR 16 bulb using the LEE Filters accessory holder. Available in either black or silver, the screw-on holder fits securely onto the bulb and can hold up to two filters. This allows for a combination of colour, diffusion or louvre effects to be used on the one fitting.

Honeycomb Louvres are available in black or silver (45° or 60°) to match the accessory holder.



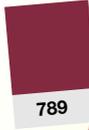
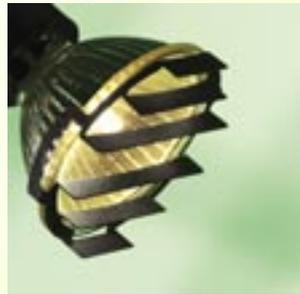
clip-on accessories

LEE Clip-on accessories are a quick and easy way of adding a filter to or limiting the glare from MR16 or PAR 16 bulbs.

The Clip-on Filter Holder holds a single filter to a standard open bulb. The holder is available in either black or silver (packs of five).

The Clip-on Baffle (also known as blade louvres) traps the peripheral light sideways, limiting glare. The baffle also gives the fixture a more professional look. Available in black or silver (packs of five).

Clip-on Barndoors trap the light sideways; this limits the glare from a bulb but also allows you to direct the illumination from the bulb to a specific area. The flaps are adjustable by rotation and by bending the hinges. The high quality material of the hinges allows you to adjust them a number of times. Available in black or silver (packs of five).



swatches



In order to give our end-users the highest possible levels of information and support, LEE Filters makes available a package of technical information.

We produce a range of swatch books, each individually developed to serve a specific purpose.

They are:

■ **The Designers' Edition** a unique swatch book that contains all of the filters in chromatic groupings, along with an additional numeric index. A numeric swatch book is also available on request

■ **The Cinematographers' Edition** a large format dual swatch book with grades of both colour correction and diffusion filters most frequently used in film.

■ **The Master Edition*** a very large format swatch of lighting products.

■ **The Venetian Edition*** a collapsible poster that is made up of a series of slats which will fold together like a concertina. Each slat has small windows cut out of it, into which samples of LEE filters have been placed, allowing the whole range to be viewed simultaneously.

■ **The Pocket Edition** a handy sized listing of all lighting filter products, together with a comparator section which identifies LEE Filters' equivalents to other manufacturers' products.

■ **The Glass Edition** a large format swatch book containing polyester lighting filter material that closely matches the colours from the glass series.

The Glass Series Venetian Edition* contains small windows of polyester lighting material that closely match the colours from the glass series. An ideal way of comparing the different colours within the range at a glance.

■ **The Fluorescent Edition** contains a sample of all the colours available as polyester inserts for the clear fluorescent sleeves.

** These swatches are not available free of charge.*



posters

To help end-users achieve the optimum benefits from LEE Filters, the company offers a series of A1 size posters covering essential filtration topics, together with comprehensive product listings.



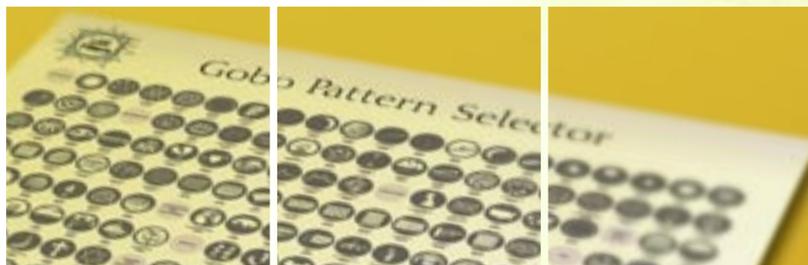
cutters

Freely available are filter cutters which enable rolls and sheets to be cut down to the required size without fuss or the use of open blades.



gobos

The LEE Filters gobo posters contain more than 900 patterns, many of them new designs developed to complement existing ranges and to broaden the range available for today's (and tomorrow's) productions. The posters are ideal for an office or studio wall.



website

Information on all LEE Filters products can be found on our website:
www.leefilters.com



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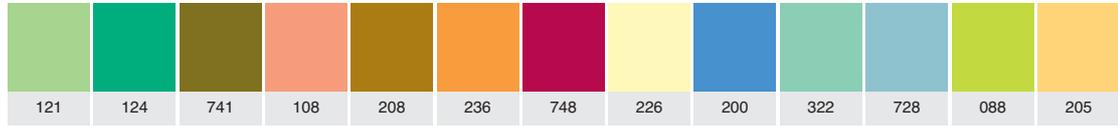
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