

3M

Radiant Light Films



Just add imagination...



Navigating this Disc

Navigation is easy! Each screen has a number of navigation buttons in the bottom left hand corner and are designated as follows:



Click to go to next slide in the section you're viewing

Click to go to the 'Contact Us' page

Click to return to the 'Home' page

Click to go to the previous slide in the section you're viewing

Other pages carry specific navigation instructions, e.g. click pictures where appropriate

CM500
CM592



Click here to continue

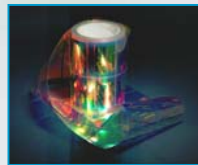


Home Page

Click on the pictures below to go direct to your chosen category.



Overview



Product
Range



Typical
Applications



Contact Us

CM500

CM592

3M

Product Overview

What are 3M™ Radiant Light Films?

3M, a leader and innovator in high-performance polymer film introduces 3M™ Radiant Light Films, a revolutionary breakthrough in multi-layer reflective film. Combining precise layers of polymer materials with different reflective qualities, 3M scientists have produced film engineered to obtain unprecedented levels of reflective vibrancy. 3M Radiant Films can be combined with suitable colour substrates to produce various vibrant colours in both reflection and transmission.

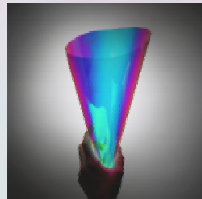
The possibilities for 3M Radiant Light Film are endless. This extremely rich technology is ideal for a multitude of decorative and technical applications for designers, product developers, packaging engineers, decorators and product engineers.

3M Radiant Light Film is another product in a long line of 3M advancements in light management, an area of research in which 3M has filed over 100 patent applications.



Product Overview

What are 3M™ Radiant Light Films?



The high reflectivity of 3M Radiant Light Film produces such brilliant colour that objects incorporating the film appear to be lit from inside. This shimmering plastic film brings a totally new level of excitement and energy to a variety of creative applications, including sporting goods, packaging, textiles, home décor, architectural displays, gift wrapping and glitter.



Crumple it up. Hold it up to the window. Roll it into a cone. Whatever you do with 3M Radiant Light Film, the brilliant reflective hues will astound you. This multi-layer, non-metallic polymeric film is as fun as it is versatile. You can print on it, laminate it, cut it and it may also be conformed it into shapes. You can even make yarn to be woven or knit into fabric. It can take on almost magical qualities depending on the material placed behind it or the way light strikes it. The uses for 3M Radiant Light Film are only limited by your imagination.



CM500

CM592



Product Overview

Typical Physical Properties

	CM592	CM500
Typical Physical Properties		
Bandwidth	590 nm – 740 nm (absorbs below 400 nm)	500 nm – 700 nm (absorbs below 400 nm)
Thickness	1.3 – 1.45 mils	1.15 mils
Shrinkage	(15 min. at 150°C) <1.5%	(15 min. at 150°C) <1.5%
Break Elongation	>60%	>60%
Tensile Strength	>20 lb/in (3.6 kg/cm)	>20 lb/in (3.6 kg/cm)
Outside Layer	Polyester	Polyester
Max. Process Temp	257°F (125°C)	257°F (125°C)
Optical Properties		
Transmission	L* = 66 to 92 a* = -56 to -12, b* = -43 to -1	L* = 35 to 75 a* = -50 to 70, b* = -80 to -10

CM500
CM592



Product Overview

Product Features

- Unparalleled colour saturation & vividness
- Variety of appearances possible with one base film
- Printable
- Thermally stable (to 125°C)
- Metal-free (therefore non-corroding / non-conductive)
- No dyes

CM500

CM592

Appearance

Normal
incidence



60 degrees



Typical change in transmitted
colour as the angle of incidence
is varied



3M

UK & Ireland Product Range

CM500 Base Film:

- Color shift = Blue to Magenta to Gold depending on viewing angle.
- 29µm thickness
- Tensile Strength – greater than 20 lb/in
- Elongation at Break – greater than 60%
- Shrinkage @150° C – less than 1.5%
- Maximum service temperature = 125°C
- Yield = 25.6 m²/kg
- Master Roll Widths = (710mm & 1,420mm
- Maximum Roll Length = 2,743Lm

CM500

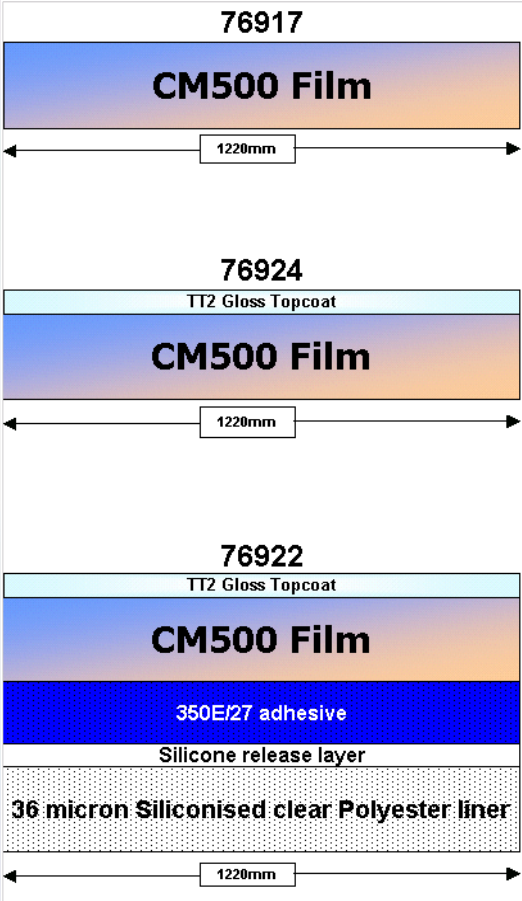
CM592



3M

UK & Ireland Product Range

CM500 Base Film:



Base CM500 Film

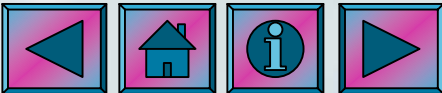
Base CM500 Film with gloss clear top-coat

Base CM500 Film with gloss clear top-coat, pressure-sensitive adhesive and liner for labels

(Alternative self adhesive label constructions may be possible. Contact us for details)



CM500
CM592



UK & Ireland Product Range

CM592 Base Film:

- Color shift = Cyan to Blue to Magenta depending on viewing angle.
- 33µm thickness
- Tensile Strength – greater than 20 lb/in
- Elongation at Break – greater than 60%
- Shrinkage @150° C – less than 1.5%
- Maximum service temperature = 125°C
- Yield = 21.8 m²/kg
- Master Roll Widths = (710mm & 1,420mm)
- Maximum Length = 2,743Lm

CM500

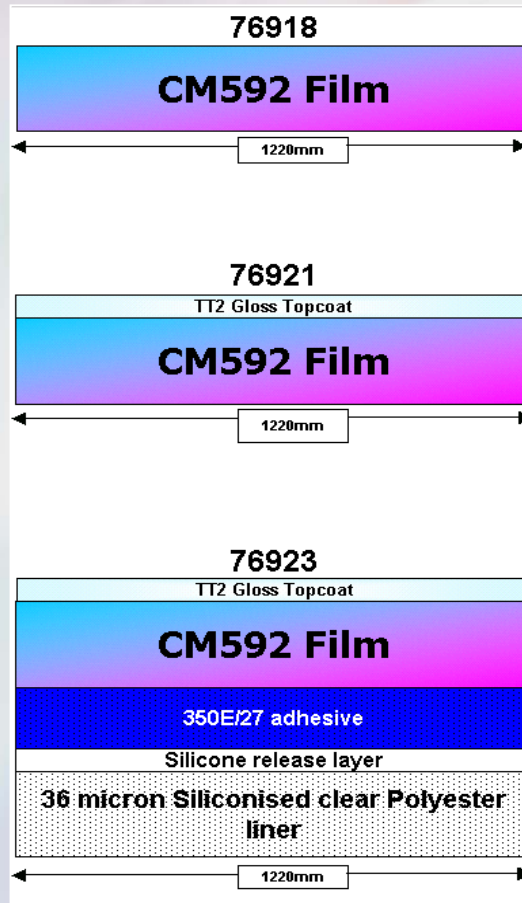
CM592



3M

UK & Ireland Product Range

CM592 Base Film:



Base CM592 Film

Base CM592 Film
with gloss clear top-coat

Base CM592 Film
with gloss clear top-coat,
pressure-sensitive adhesive
and liner for labels

(Alternative self adhesive label
constructions may be possible.
Contact us for details)



CM500
CM592



Applications Home Page

Click on the pictures below to go direct to your chosen category.



Packaging



In-mould
Labelling



House wares
and Clothing



Point of
sale



Multimedia
and Print



Building and
Construction



Labelling

This technical information and data should be considered representative or typical only and should not be used for specification purposes. The information is intended as a guideline only. Users should carefully evaluate products for their application.



CM500
CM592

Packaging

CM500
CM592



Product & Gift Boxes:

3M™ Radiant Light Films provide a dazzling array of colour to enhance and bring to life any product packaging, in both board or plastic. When laminated to a white or coloured background, Radiant Light Film offers an almost endless array of colour options.



3M Radiant Light Films

Packaging

CM500
CM592



Retail Carrier Bags:

In the example shown above, a paper carrier bag has a window of 3M™ Radiant Light Film attached behind the die cut branding, offering a unique visual contrast.



Packaging

CM500
CM592



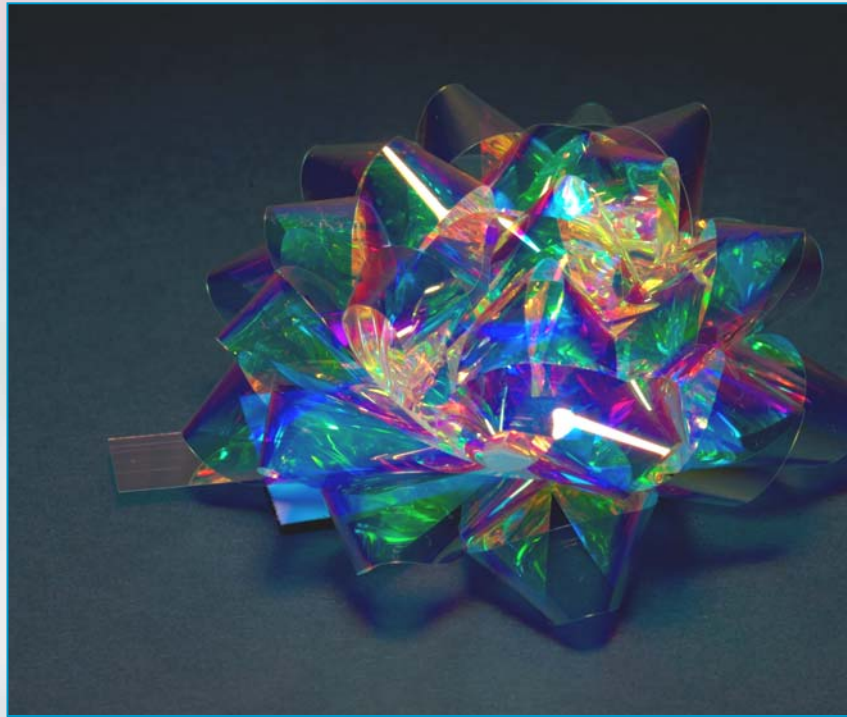
Perfume & Cosmetics packaging:

3M™ Radiant Light Films have been used here as part of the product's overall brand identity – the packaging here offering vibrancy and visual impact.



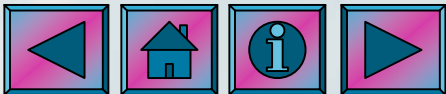
Packaging

CM500
CM592



Decorative Packaging:

3M™ Radiant Light Films provide a dazzling array of colour and vibrancy when used in packaging bows and ribbons – the light catching many angles of film in a small space.



Packaging

CM500
CM592



High Value Food & Drink Packaging:

In the example shown above, a printed box has a window of 3M™ Radiant Light Film attached behind the cut-out, offering a unique visual contrast.



Packaging

CM500
CM592



Flow-wrap Packaging:

3M™ Radiant Light Films can be specially coated to be heat-sealed in flow-wrapping applications – ideal for samples, promotional items or small individual products.



House Wares and Clothing

CM500
CM592



Interior Lighting Effects:

3M™ Radiant Light Films have been used in interior lighting, such as the lamp-shade shown above for a unique visual effect.



House Wares and Clothing

CM500
CM592



Air-freshener:

3M™ Radiant Light Films have been precision-cut to make glitter, which can be suspended within a variety of clear materials to produce decorative effects as shown in the candle air-freshener above.



House Wares and Clothing



CM500
CM592

Clothing Branding:

3M™ Radiant Light Films are metal-free. They can therefore be RF welded, thermoformed or embossed when laminated to a suitable substrate to make badges for clothing, footwear, bags, belts and sports equipment.



Multimedia and Print

CM500
CM592



CD / DVD:

3M™ Radiant Light Films, when laminated to white or coloured board offer a unique packaging material, which could help sell your product off the shelf, purely on visual impact. The films are ideal for CD or DVD packaging as shown in the example above.



Multimedia and Print



CM500
CM592

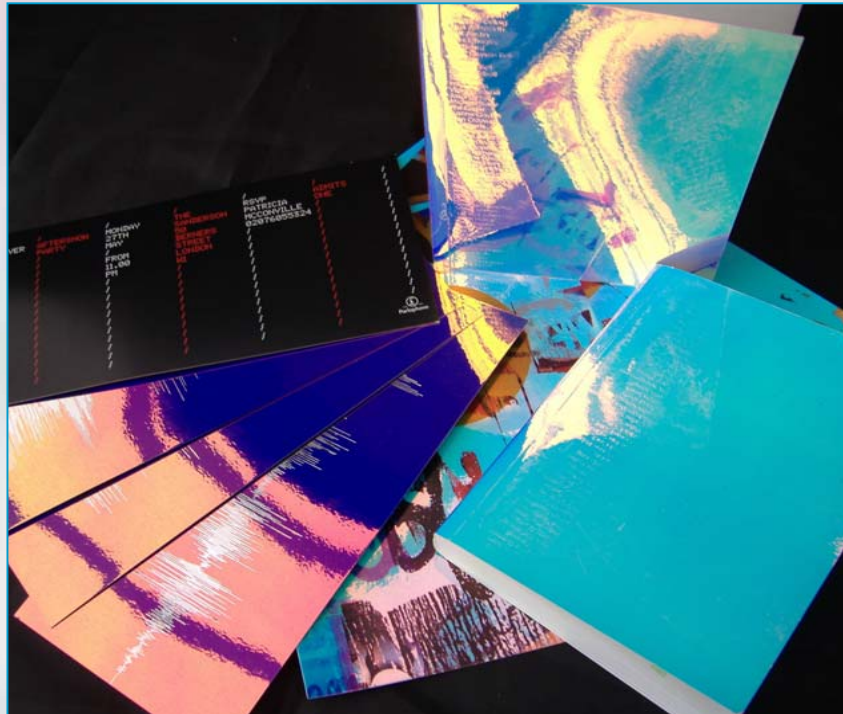
Brochures & Printed Media:

3M Radiant Light Films provide a unique effect, offering maximum visual impact. In the application above, Kylie Minogue used Radiant Light Film over a blue backing for her 2002 tour guide.



Multimedia and Print

CM500
CM592



Brochures & Printed Media:

3M Radiant Light Films can help enhance print, such as flyers, product information, in-store promotional items, invitations and corporate identity.



Multimedia and Print



CM500
CM592

Greetings Cards & Stationery:

3M Radiant Light Films provide a vibrant and unique effect when laminated to board to produce cards, stationery or book covers.



Labelling

CM500
CM592



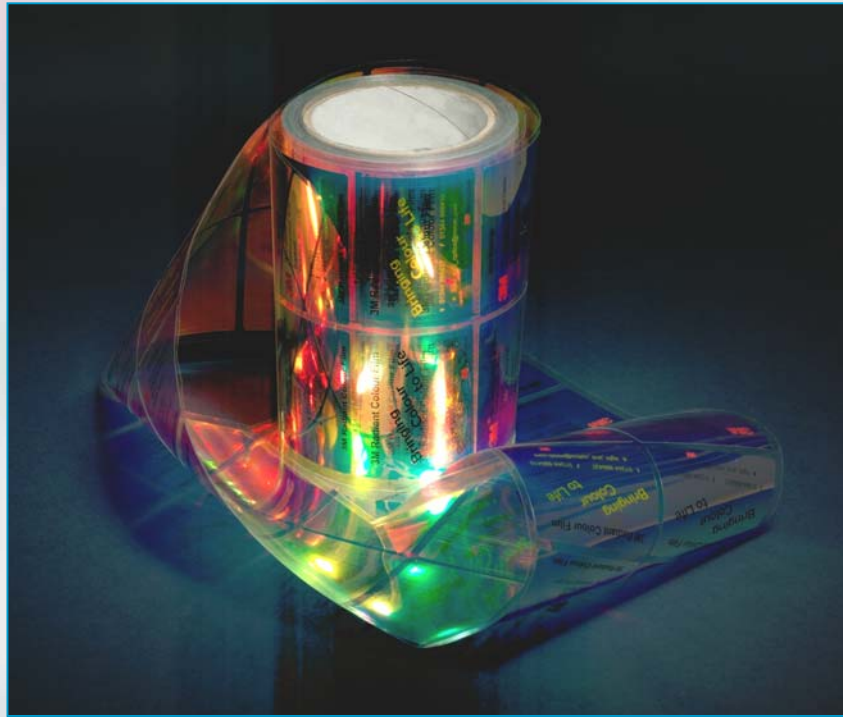
Cosmetics & Toiletries:

3M™ Radiant Light Films provide a dazzling array of colour to enhance and bring to life any product packaging. When laminated to a white or coloured background, Radiant Light Film offers an almost endless array of colour options.



Labelling

CM500
CM592



Product Labels:

3M™ Radiant Light Films, in a self-adhesive label material format offer a unique labelling material, which could help sell your product off the shelf, purely on visual impact.



Labelling

CM500
CM592



Security Labels:

By combining 3M Radiant Light Film with security label materials, the label not only gives evidence of tampering, but also can be used as part of the product's brand identity.



In-mould Labelling

CM500
CM592



In-mould labelling:

3M™ Radiant Light Films provide a dazzling array of colour to enhance plastic components such as mobile phone covers, decorative plastic trim or plastic packaging where maximum visual impact is desired.



In-mould Labelling



CM500

CM592

In-mould labelling:

Even fish like 3M™ Radiant Light Films! The films provide a dazzling array of colour to make the most elusive fish curious as shown in the lures above.



Point of Sale

CM500
CM592



Point of Sale:

3M™ Radiant Light Films provide a dazzling array of colour to enhance and bring to life any point of sale or in-store display. Radiant Light Film can be laminated to many materials, such as flexible or rigid plastics.



Point of Sale

CM500
CM592



Point of Sale:

3M™ Radiant Light Films provide a dazzling array of colour to enhance and bring to life any point of sale or in-store display. Radiant Light Film can be laminated to many materials, such as flexible or rigid plastics.



Point of Sale

CM500
CM592



Point of Sale:

3M™ Radiant Light Films provide a dazzling array of colour to enhance and bring to life any point of sale or in-store display. Radiant Light Film can be laminated to many materials, such as flexible or rigid plastics.



Building and Construction

CM500
CM592



Architectural:

3M Radiant Light Films have been used in architectural glass applications. **Please contact us for more information before considering Radiant Light Films for any architectural or glass applications.**



3M Radiant Light Films

Building and Construction



CM500
CM592

Architectural:

3M Radiant Light Films have been used in architectural glass applications. **Please contact us for more information before considering Radiant Light Films for any architectural or glass applications.**



Contact Us

For find out more about 3M™ Radiant Light Film, contact:

Rachel Sanderson

Telephone: 07748 147222
E-mail: rasanderson@mmm.com

[CLICK HERE TO SEND E-MAIL](#)

or contact your local 3M Converter Markets Customer Service Centre below.

CM500
CM592



**3M Converter Markets
Tapes & Adhesives Group
3M United Kingdom PLC**

3M House,
28 Great Jackson Street
Manchester M15 4PA
Tel: 0161 237 6165
Fax: 0161 237 9320

**3M Converter Markets
Tapes & Adhesives Group
3M Ireland**

3M House, Adelphi Centre
Dun Laoghaire
Co. Dublin
Tel: (01) 280 3555
Fax: (01) 280 3509

3M is a trademark of 3M Company
© 3M May 2006

