

Phototherapy Light Shields

Date: 8-Dec-01

Part No.

Issue: 1

Phototherapy Light shields are designed to reduce the intensity of Ultraviolet and Blue light (300nm to 500nm) falling on an infant's eyes during the Phototherapy process. This is achieved by the use of Amber 300 Perspex, which reduces the intensity of light specifically between the wavelengths of 300nm to 500nm.

Used correctly they can replace eye pads.

Fig 1. shows the spectral response curve which has been checked by N.P.L (National Physics Lab), and shows the Amber 300 material removes almost all the Ultra Violet and Blue lights in the 300-500 nm region.

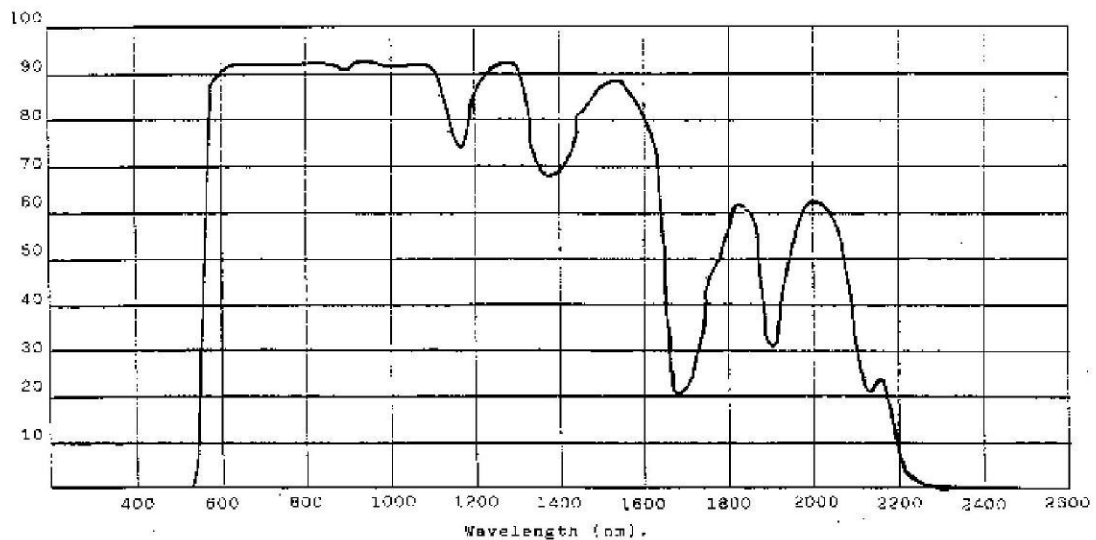


Fig 1 Spectral response curve

There are several types of Phototherapy Light Shields available:

1. Complete Headbox

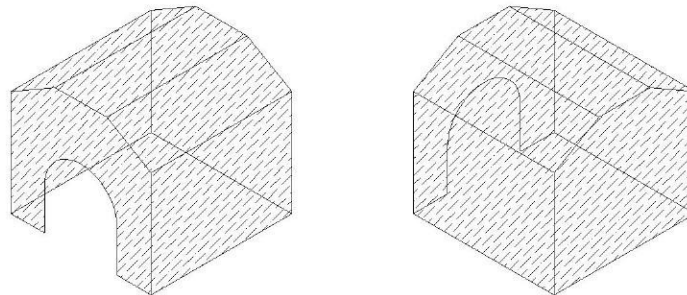


Fig 2. Full amber head box

The complete head box is manufactured in Amber 300. This version reduces the need for a separate shield over the headbox. It is also the most efficient and safest as it allows the phototherapy light to be used at any

Phototherapy Light Shields

Date: 8-Dec-01

Part No.

Issue: 1

angle without any having the chance to enter the head box.

Warning:

To avoid the chance of CO₂ build up, a minimum flow of 6 litres/minute is recommended.

See accompanying leaflet on Using Head boxes for full instructions on head box use.

2 .Semi-Headbox

A range of head boxes in Amber 300 without rear walls are available. This allows the open aspect to reduce any CO₂ build up, yet retains most of the advantages of the full head box. The neck aperture ensures that the head box will follow the baby's movement whilst still preventing the Ultra Violet- light to enter from the front sides and top.

N.B: UV light is able to enter directly or by reflection through the rear panel, which is open. The phototherapy light must not point into the rear of the head box

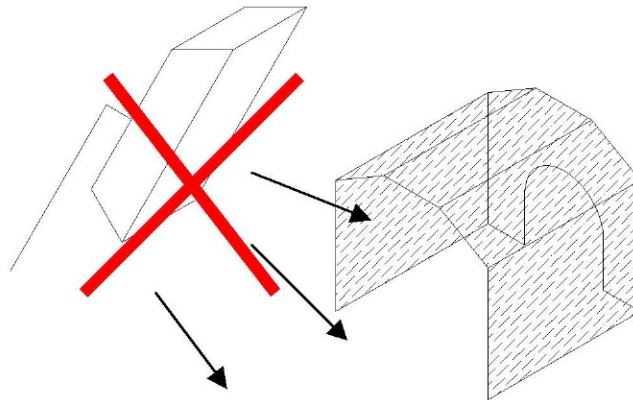


Fig 3 Semi Head box

3. Open Lightshield

This consists of one panel of Amber 300 formed to cover an existing Neonatal or Paediatric Headbox This is most suitable for Phototherapy units which direct the light vertically down as neither the front or rear is shielded.

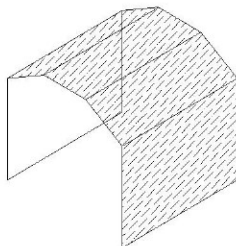


Fig 4. Open Light shield.

Phototherapy Light Shields

Date: 8-Dec-01

Part No.

Issue: 1

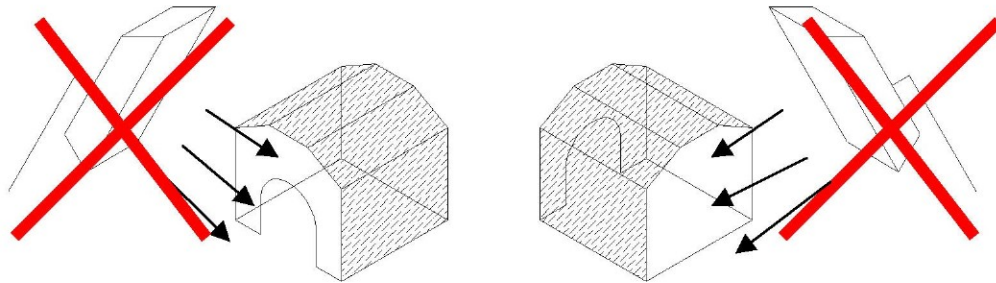


Fig 5. Incorrect lighting on open Light Shield covering a head box.

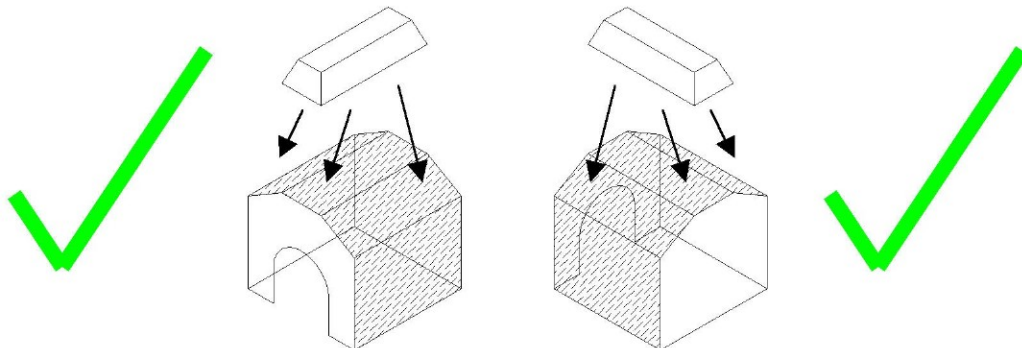


Fig 6. Correct lighting on open Light Shield covering a head box.

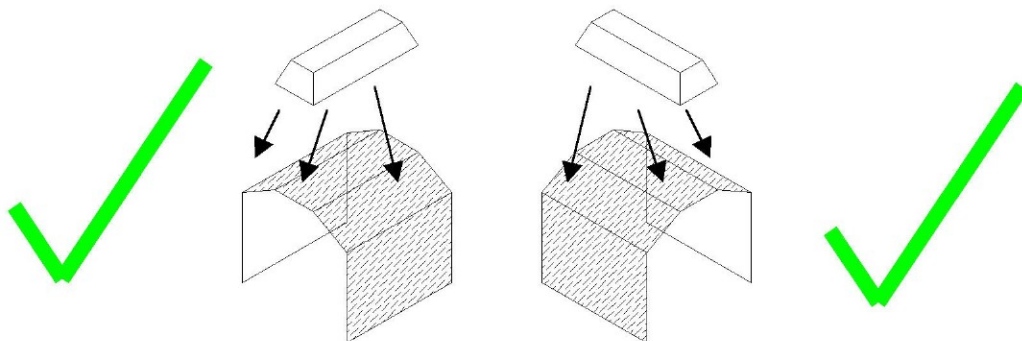


Fig 7. Correct lighting on open Light Shield without covering a head box.

NB: The open Light shield should only be used without a head box if the infant is immobilized and there is no chance of UV entering either front or rear. I.e. the Phototherapy light should be immediately above the light shield

4. Specials

A standard range of the above product is available in Neonatal: Pediatric and Infant sizes however it is appreciated that the user may have different requirements. Specials are therefore available on request. The only limitation in any customer design is the specification to ensure no UV or blue light reaches the patients eyes.