



Display Brightness Film
(DBF)

Luminit's Display Brightness Film is a light-management film that increases the brightness of LCD displays used in automotive, avionics and consumer electronics applications. This highly specialized prismatic film utilizes the principles of refraction and total internal reflection to recycle and redirect light to manage the angular output from a back-light unit (BLU) and increase the brightness of a display. The standard version has a gloss finish on one side, and an optional diffuser is available to reduce common unwanted optical artifacts such as mura, sparkle and moiré. The result is display performance that is brighter and more efficient. The prismatic structure is embedded on a 250um thick polycarbonate substrate which has higher temperature durability when compared to polyester films. Tests show DBF within 4% of the performance characteristics of similar film solutions (BEF-2).

Benefits:

- Non-birefringent
- Increases brightness of LCD backlights
- Power savings or thermal management
- Can reduce film stack and assembly if combined with a diffuser

Applications:

- Automotive LCD displays
- Avionics displays
- Medical displays
- Portable devices

Specifications:

- Substrate: 250um polycarbonate
- Transmission Spectral Range: 400nm to 800nm
- Size: up to 600mm
- Temperature Range: -30°C to 80°C @ 240 hrs.
- Humidity: 95% ± 5% RH @ 24 hrs.
- Pencil Hardness: > 2H
- Yellow Index: <2% direct exposure (240 hours)

