

311 KIMBALL HILL ROAD, WILTON, NH 03086-9742 USA
 Tel: (603) 878-1616 Tel: 1-888-KIM-PHYS (1-888-546-7497)
 Fax: (603) 878-3700 E-Mail: info@kimphys.com Web: www.kimphys.com

RUGGED PHOSPHOR SCREENS

The Kimball Physics Rugged Phosphor Screen consists of a phosphor coating bonded to a conductive glass plate and mounted in a Multi-CF™ Thin Flange.



SPECIFICATIONS

RUGGED PHOSPHOR SCREENS	
Phosphor Type	ZnS: Ag Type 1330 (P-22 Blue)
Saturation Threshold	3×10^{-2} Amps/cm ²
Peak Emitted Wavelength	450 nanometers
Maximum Input Power Density	1 Watt/cm² CAUTION: Exceeding 1 Watt/cm ² input power may damage the phosphor coating.
Minimum Power Density for screen response	5×10^{-5} Watts/cm ²
Mounting	2¾ CFF or 4½ CFF
Maximum Bakeout	200°C
Operating Vacuum Level	Only to 10 ⁻⁸ torr, possible outgassing at lower end of vacuum range

CARE AND HANDLING

CAUTION: Handle with care. Although the phosphor is bonded to the glass to resist mechanical shock or accidental touching of the screen, handle the ruggedized screen with reasonable care and do not scrape the phosphor.

- ▶ For protection the Rugged Phosphor Screen is shipped with a Plexiglas cover and steel base. This cover should be removed only by a qualified technician. Wear clean room gloves.
 Remove the 12-point bolts.
 Carefully lift off the Plexiglas cover; this will expose the phosphor surface.
 Holding the edge of the flange, remove phosphor screen with its flange from the steel base.
 Save the cover and base for storage or shipping.
- ▶ The phosphor screen is mounted in a CF flange for installation in vacuum.
- ▶ **After installation, ensure that the screen is properly grounded.**
- ▶ When using the phosphor screen detector, input power density to the screen must not exceed **1 Watt/cm²**. To preserve screen brightness, it is advisable to use the lowest power density that provides a clear spot.
CAUTION: Exceeding 1 Watt/cm² input power may damage the phosphor coating.

$$\text{Input Power Density} = \frac{\text{Beam Current} \times \text{Beam Energy}}{\text{Spot Size (area)}}$$