

GEN III

18 mm, Inverting
Image Intensifier Tube



Description

HD-1520 series is 18mm, Gen III, Inverting Image Intensifier Tube.

It is a high-gain, high-photosensitivity Image Intensifier Tube suitable for passive night vision systems and goggles.

The HD-1520 consists of a high-efficiency (GaAs) extended red photo-cathode on a glass input window; a micro-channel plate (MCP) current amplifier; and Inverting fiber optic phosphor screen.

The HD-1520 has a high-voltage power supply which incorporates (ABC) automatic brightness control to provide a constant output image brightness as light levels varies. The power supply also provides (BSP) bright source protection to guard the tube against exposure to high levels of light.

The HD-1520 is completely self-contained Image Intensifier Tube encapsulated within a hard-surface insulating sleeve.

Performance

Luminous Sensitivity at 2856°K

Radiant Sensitivity at 830 nm

Signal-to-Noise Ratio

EBI

Luminous Gain at $2X 10^{-6}$ fcd

Supply Current

Output Uniformity at 2856°K

Limiting Resolution

MTF at 2.5 lp/mm

7.5 lp/mm

15.0 lp/mm

Photocathode diameter

MTTF

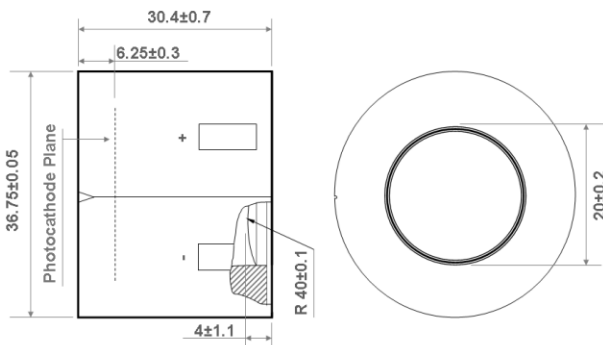
| units | min. | max. |
|--------------------------|--------|--------|
| $\mu\text{A/lm}$ | 1650 | |
| mA/W | 160 | |
| | 25 | |
| 10^{-11}lm/cm^2 | | 2.0 |
| f1/fc | 40,000 | 70,000 |
| mA | | 32 |
| | | 3:1 |
| lp/mm | 64 | |
| % | 92 | |
| % | 80 | |
| % | 60 | |
| mm | 17.5 | |
| hours | 10,000 | |

Picture Quality Table:
Maximum allowable spots in
each Zone.

Spot Size
(microns)

401-500
301-400
251-300
151-250
75-150

| | I | II | III |
|---|---|----|-----|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 1 | 2 | |
| 1 | 2 | 3 | |



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