



Product Features

- Gen III or Gen IIIU intensifier
- Full automatic gating control and automatic intensifier gain control
- Manual or external gate control
- Synchronous to frame or field timing
- Fast gating (100 ns)
- High resolution fiber coupled CCD
- Shutter and integration capability
- Compact size and 12V DC operation
- Dynamic range 10^{-4} to 50,000 lux at $f=1.4$

General Description

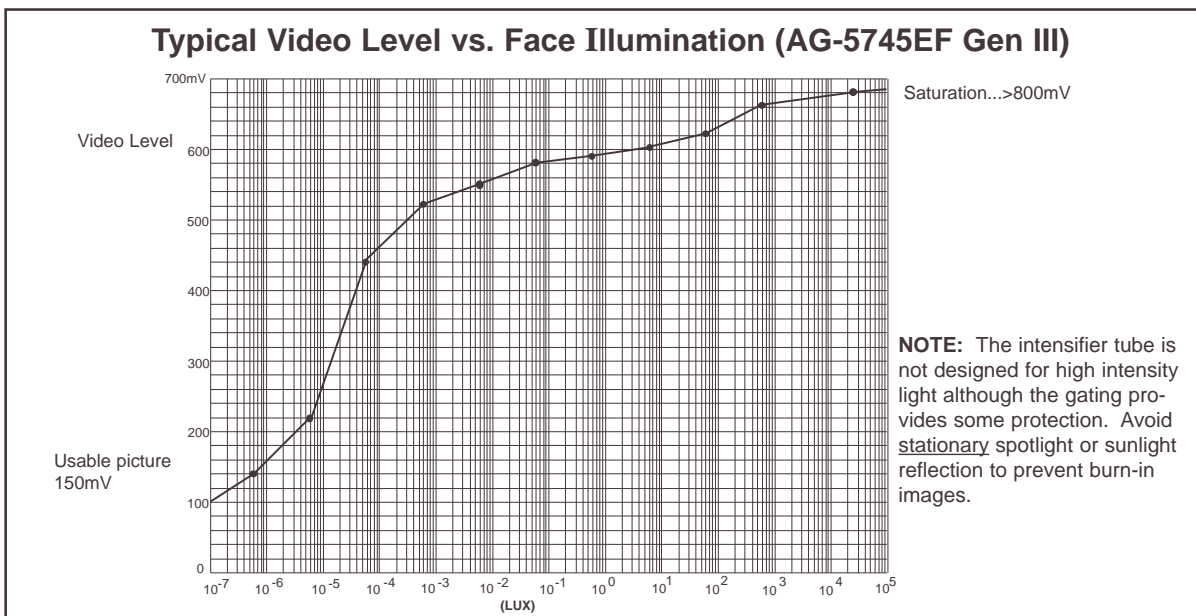
The AG-5745EF-3 (Gen III intensifier) and AG-5745EF-3U (Gen III "Ultra" intensifier) are high resolution, fully automatic gated intensified CCD cameras. These cameras are well suited for military, aerospace, remotely piloted vehicles, underwater observation, mobile surveillance and scientific applications.

The gate speed is continuously controlled from 60 Hz (field mode) or 30 Hz (frame mode) to 100 ns maximum speed. The dynamic range, typically 10^{-4} lux to 50,000 lux ($1:5000,000,000$), has a smooth, fast response. The internal CCD camera automatic gain control function offers optimum picture quality. Overall TV resolution is 400 lines with excellent contrast due to the refined signal processing of the TM-745E. The AG-series cameras have variable edge enhancement for higher definition (factory setting is at min. level). Switches provide for manual and external gating control while also allowing the gate pulse output to be monitored.

Intensifier Tube Specifications

| | Gen III | Gen IIIU |
|-----------------|--|--|
| Type | 18mm gated, proximity focus | |
| Input | 1" (18mm diameter) | |
| Output | 2/3" (tapered-fiber coupled to CCD) | |
| Photocathode | GaAs | |
| Phosphor Screen | P43 | |
| Gain | 20,000-35,000 | 30,000-50,000 |
| Resolution | 45 lp/mm | 64 lp/mm |
| EBI | 2.5x10 ⁻¹¹ Im/cm ² | 2.5x10 ⁻¹¹ x Im/cm ² |
| | (max) | (max) |
| Tube Life | 10,000 hrs | 10,000 hrs |

Typical Video Level vs. Face Illumination (AG-5745EF Gen III)



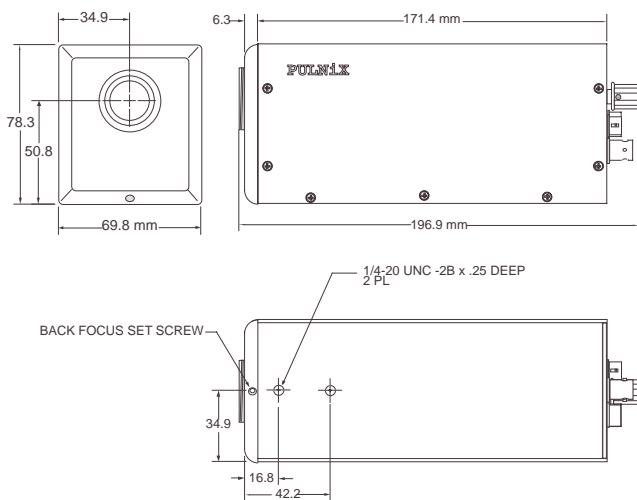
Internal CCD Camera Specifications

| Model | AG-5745EF-3/AG-5745EF-3U (EIA) | AG-5765EF-3/AG-5765EF-3U (CCIR) |
|-------------------|--|--|
| Imager | 2/3" interline transfer CCD | |
| Pixel | 768 (H) x 493 (V) | 756 (H) x 581 (V) |
| Cell size | 11 μ m x 13 μ m | 11 μ m x 11 μ m |
| Scanning | 525 lines 60 Hz, 2:1 interlace | 625 lines 50 Hz, 2:1 interlace |
| Sync | Internal/external auto switch HD/VD, 4.0 Vp-p impedance 4.7K Ω VD=interlace/non-interlace | |
| TV resolution | HD=15.734kHz \pm 5% 570 (H) x 350 (V) | HD=15.625kHz \pm 5% 560 (H) x 420 (V) |
| S/N ratio | 50dB min. | |
| Min. illumination | 0.5 lux f=1.4 without IR cut filter | |
| Video output | 1.0 Vp-p composite video, 75 Ω | |
| AGC | ON | |
| Gamma | 1.0 | |

AG Series Specifications

| Model | AG-5745EF-3/AG-5765EF-3 | AG-5745EF-3U/AG-5765EF-3U |
|-------------------|--|---------------------------|
| Max. gating speed | 100 ns, 10 ns w/ext. gate | |
| Gain control | Variable | |
| Min. sensitivity | 1x10 ⁻⁶ lux at face plate | |
| Min. illumination | 1x10 ⁻⁴ lux f=1.4 | |
| Lens mount | C-mount standard. Use 1" format lenses | |
| Power req. | 12V DC (11.5 V to 15V), 600 mA, 6W typ. | |
| Size (L x W x H) | 171 mm x 70 mm x 78 mm (6.73" x 2.76" x 3.07") | |
| Weight | 3 lbs., 2 ounces (1.429 kg) | |
| Power cable | 12P-02 or KC-10 | |
| Power supply | PD-12 or K25-12V | |
| Operating temp. | -10°C to 50°C | |

Physical Dimensions



Pin Configuration

12-Pin Connector

- | | |
|----|------------|
| 1 | GND |
| 2 | +12V |
| 3 | GND |
| 4 | Video |
| 5 | GND |
| 6 | VINIT |
| 7 | VD in |
| 8 | GND |
| 9 | HD in |
| 10 | GND |
| 11 | Int. cont. |
| 12 | GND |

6-Pin Connector

- | | |
|---|--------------|
| 1 | D2 |
| 2 | GND |
| 3 | Video |
| 4 | +12V (or 5V) |
| 5 | D0 |
| 6 | D1 |
- D0, D1, D2 Shutter control

AG-5745EF

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