



HYBRID EYESAFE LASER RANGEFINDER RECEIVER

- HIGH SENSITIVITY
- HERMETIC TO-8 PACKAGE, 0.1 CU INCH
- FAST RECOVERY – LOW MINIMUM RANGE
- InGaAs APD DETECTOR
- SINGLE SUPPLY
- FIELD PROVEN PERFORMANCE



DESCRIPTION:

The **Model 755** hybrid eyesafe laser rangefinder receiver is designed for laser ranging/surveying equipment. Because of the compact construction (Modified TO-8 header) and the PCB mounting capability, it is ideal for miniature applications. Fast recovery from T_o overload allows ranging to close objects without compromising long range performance. The incorporation of an InGaAs APD gives very high sensitivity.

SPECIFICATIONS:

| | | | |
|-----------------------------------|---|--------------------|---|
| Detector | 1.54 μ m, 200 μ m \varnothing , InGaAs APD Temperature compensated bias regulator | Output | TTL or CMOS compatible, negative logic. Start/Stop on common line. ≥ 40 ns pulses. 470 Ω internal pull up to +5V. Maximum sink current 5mA. |
| Sensitivity | 8nW typical at 1.54 μ m, 28ns pulse, 50% detection, 0.1% FAR, 20 $^{\circ}$ C, degrades with narrower pulses and at higher temperatures. | Alignment | Analog test point for alignment (pin 2 or 8) |
| T_o Pulse | Optical >0.1mW or Electrical Pull output to zero for 100ns. An open-drain FET is recommended. | Power | +12 \pm 0.5VDC at 35mA typical and ≥ 100 V via current limit resistor at 100 μ A. See application notes for external resistor values for various supply voltages. |
| Time Programmed Gain (TPG) | 1/R ² law operates from minimum range of ~30m to 2km with separate Tx/Rx optics. 0.7V or open enables TPG. 0V or GND inhibits TPG and holds low gain. | Temperature | Operating -32 $^{\circ}$ to +64 $^{\circ}$ C Storage -55 $^{\circ}$ to +125 $^{\circ}$ C |
| Adjustments | Trigger level is adjustable to allow a change in signal-to-noise ratio. | Connections | PCB mount, pins |
| | | Size | 0.6" \varnothing x 0.425" |



Specifications subject to change without notice.

U.S. Patent No.: 4,939,476

APPLICATIONS:

Laser Ranging and Surveying

"In the event this commodity will be transferred to a "foreign person" as defined in 22 CFR 120.16, either outside or within the United States, a validated US State Department license is required."

MODEL NUMBER

| | | |
|-------------------|--------------------------------------|-----|
| Detector Diameter | InGaAs APD with 200 μ m Diameter | 755 |
|-------------------|--------------------------------------|-----|

Typical Part Number: 755 =

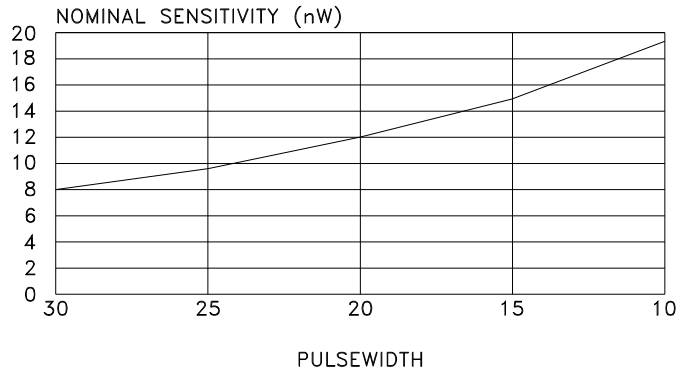
InGaAs Detector Diameter:

200 μ m

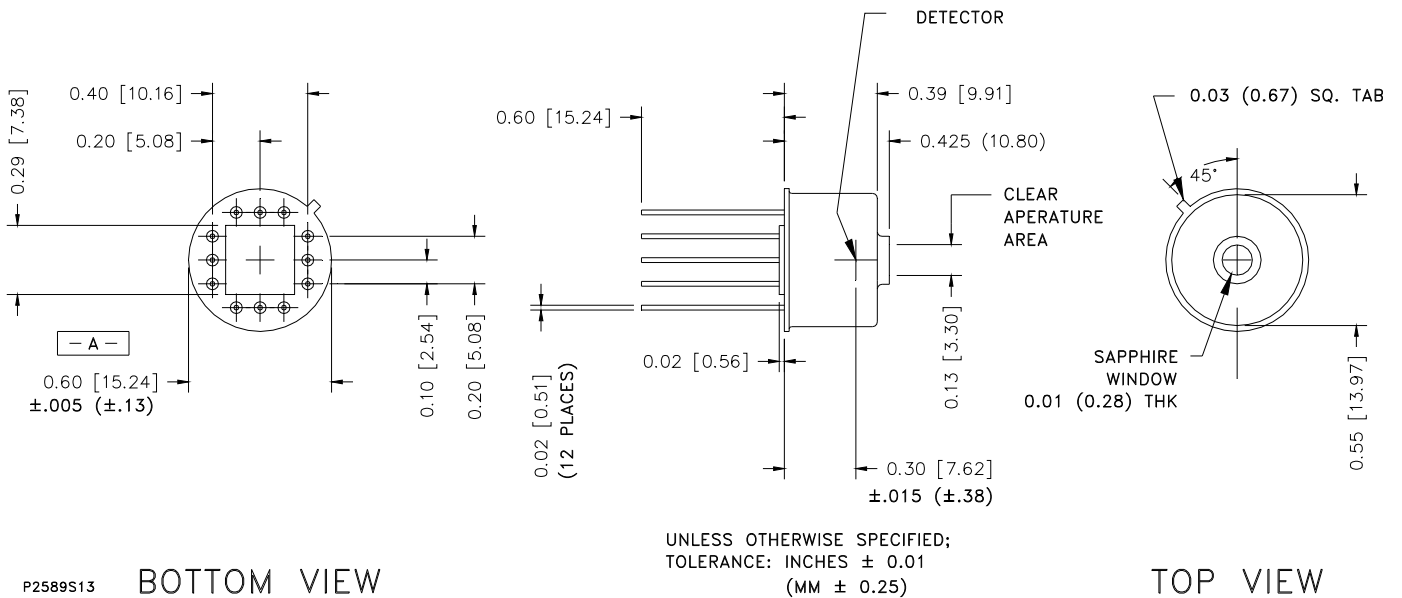
Connections:

PCB mount, PINS

MODEL 755 HYBRID RECEIVER
SENSITIVITY vs PULSEWIDTH



P2589SH2_7.DWG



P2589S13

BOTTOM VIEW

TOP VIEW