



Not Recommended for New Designs (NRND)
See Model 755A-04.1

MODEL 755
HYBRID EYESAFE
LASER RANGEFINDER RECEIVER

ANALOG MODULES, INC.

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"
		Weight	≤ 0.173 oz (4.9 grams)



Specifications subject to change without notice.

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."

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MODEL NUMBER

Detector Diameter	InGaAs APD with 200 μ m Diameter	755
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Typical Part Number: 755 =

InGaAs Detector Diameter:

200 μ m

Connections:

PCB mount, PINS

MODEL 755 HYBRID RECEIVER
SENSITIVITY vs PULSEWIDTH

