



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

MODEL 755A-LT-04

LOW COST HYBRID EYESAFE
LASER RANGEFINDER RECEIVER

ANALOG MODULES, INC.

LOW COST HYBRID EYESAFE LASER RANGEFINDER RECEIVER

- HIGH SENSITIVITY
- HERMETIC TO-8 PACKAGE
- FAST RECOVERY – LOW MINIMUM RANGE
- DUAL WAVELENGTH InGaAs APD DETECTOR
- SINGLE SUPPLY, ONLY 85 mW
- LOW COST



DESCRIPTION:

The **Model 755A-LT-04** is a low-cost hybrid eyesafe laser rangefinder receiver designed for high volume programs requiring high performance and aggressive pricing. Cost savings are achieved from lower cost materials and streamlined conformance test requirements. Rigorous process control ensures reliability and performance. Fast recovery from T_o overload allows ranging to close objects without compromising long range sensitivity. The incorporation of an InGaAs APD gives very high sensitivity with time programmed gain to minimize false targets. Operation at both 1.06 μm and 1.54 μm is possible over a wide range of pulse widths.

SPECIFICATIONS:

All measurements made at 20°C

PARAMETER		Min.	Typical	Max.	Units
InGaAs APD Active Diameter		180	200	220	μm
Sensitivity (1.54 μm , 20 ns pulse, 50% Pd, 0.1% FAR)		1.5	6	15	nW
Sensitivity (1.06 μm , 20 ns pulse, 50% Pd, 0.1% FAR)		3	12	30	nW
Low Gain Sensitivity (1.54 μm Optical, 50% Pd)		0.6	4	15	μW
Time Programmed Gain (TPG) (see application note)		26	28	31	dB
Target Separation (1:1 power ratio see application note)		-	22	30	m
10 mW Overload Recovery (1:1 power ratio see application note)		-	0.55	1	μS
Output (TTL or CMOS compatible, negative logic)	HI	2.4	3.3	4.5	V
	LOW	0	0.5	0.6	V
Supply Voltage		+4.85	+5.0	+12.6	V
Current Draw @ High Gain		11	13	15	mA
Current Draw @ Low Gain		20	22	25	mA
APD Bias Voltage (Pin 10)		40	70	82	V
Bias Current into Pin 10 (see application note)		10	20	80	μA
Operating Temperature	@ +5 V	-40	-	+85	°C
	@ +12 V	-40	-	+71	°C
Storage Temperature		-55	-	+100	°C
MTBF (Ground benign at 55°C per Telcordia SR-332)			150,000 *		Hours
Size			0.6 \varnothing x 0.425		Inches
Weight			0.14 oz (4.1 grams)		

Specifications subject to change without notice.

* IPC-A-610 Class II Workmanship

APPLICATIONS:

Laser Ranging and Surveying

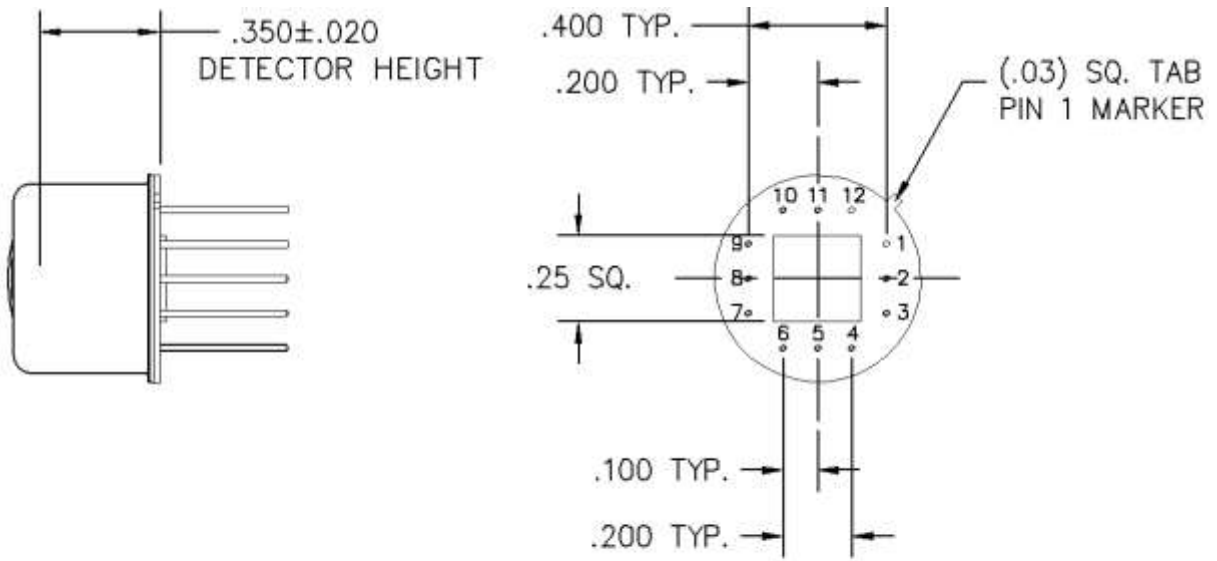
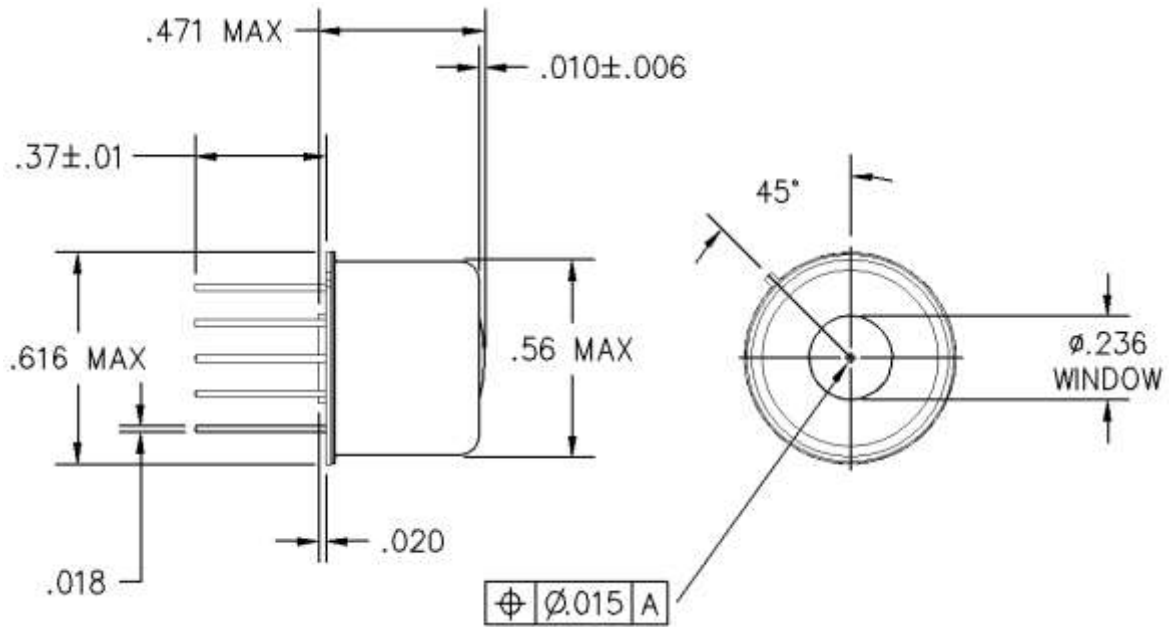
"In the event this commodity will be transferred to a "foreign person" as defined in 22 CFR 120.16, either outside or within the United States, a validated US State Department license is required."



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OPERATING NOTES:

See application notes for detailed operating information.



8181TKSH2.DWG

UNITS: INCHES

TOLERANCES
.XX=±.02
.XXX=±.005

WINDOW: .042±.006 THK

REFRACTIVE INDEX: 1.471 @ 1550nm. AND 1.477 @ 1060nm