

3-mm InGaAs Quadrant PIN Receiver with 4 TIAs



DESCRIPTION

CMC Electronics' 264-339826-VAR series is an InGaAs quadrant PIN receiver with 4 built-in trans-impedance amplifiers (TIA) providing the largest active area in the most compact hermetic package in its class.

The 264-339826-001 is based on a 3-mm diameter quadrant InGaAs PIN with individual GaAsFET input TIAs for each quadrant, in a 46-lead square hermetic package. This receiver is well suited for a variety of environmental conditions. Each amplifier has an overload input protection circuit from high optical power exposure providing accurate detection of wide optical signal levels. A fast recovery time option is available for handling the overload.

The receiver module has standard ambient light rejection circuit, eliminating unwanted background light signals. The optional externally controlled single or multi-stage AGC provides high-dynamic range. Elective supply input filtering is available for supporting lower cross-talk performance. The outputs can be AC or DC coupled to a 100 ohms' load, easing the next level design as required by the end user.

Customization such as detector size, bandwidth, AGC levels, packaging, are available to fit customers' system design needs. Additional features can be incorporated without compromising weight and size of the receiver.

CMC is committed to:

- Work closely with your engineering team throughout the project
- Develop a solution that's tailored to your design needs
- Take the time required to deliver a quality product

FEATURES

- 3-mm InGaAs Quad PIN
- 30 MHz Bandwidth
- Spectral Response: 800-1700nm
Typical use: 1550-1570nm eye safe range
- Low Noise Equivalent Power (NEP)
- Optional Automatic Gain Control (AGC)
- Ambient Light Rejection
- Optional Fast Overload Recovery

APPLICATIONS

- Laser Spot Tracking
- Laser Alignment
- Guidance
- Free Space Optical Communication
- Position Sensor
- Laser Range Finding

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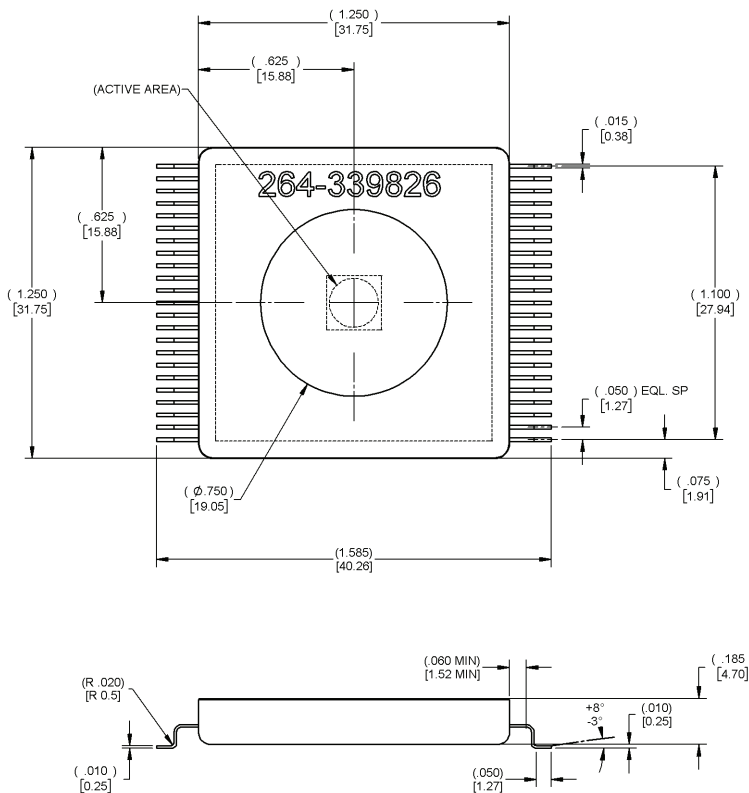
The largest active area in the most compact hermetic package in its class.

Electro-Optical Characteristics at $T_A = 25^\circ\text{C}$

Unless otherwise specified: $V_+ = 5\text{V}$, $V_- = -5\text{V}$, $V_{\text{pin}} = 5\text{V}$, $R_L = 100\Omega$ AC, $\lambda = 1570\text{ nm} \pm 10\text{ nm}$; values presented for VAR-001, without options (Externally AC coupled through $4.7\mu\text{F}$)

Parameter/Condition	Min.	Typ.	Max.	Unit
Responsivity (R) 1570 nm	40	80	-	kV/W
Noise equivalent power (NEP = E_n/R) 1570 nm	-	8	12	fW/ $\sqrt{\text{Hz}}$
Output impedance	-	10	-	Ω
Bandwidth = $f_{-3\text{dB}}$	25	30	-	MHz
Rise time (10-90%)	-	12	15	ns
Fall time (90-10%)	-	12	15	ns

Package Dimension (inches) [mm]



For more information, visit www.cmcelectronics.ca
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