



## PD850-27TF-AMP

- GaAs PIN Photodiode with integrated TI Amplifier
- Responsivity Range 770 – 860 nm
- 2.5 Gbps Data Rates
- Chip Size 0.27 x 0.27 mm
- TO-46 Package, Flat Window

### Description

**PD850-27TF-AMP** is a GaAs PIN Photodiode with **integrated transimpedance amplifier** and a responsivity range of 770-860 nm. It features of 2.5 Gbps data rates, high sensitivity, and comes in hermetically sealed TO-46 package with flat window.

### Maximum Ratings

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Supply Voltage	$V_{supply}$	0	4	V
Incident Optical Power	$P$	Average 0 / Peak 4		dBm
Operating Temperature	$T_{CASE}$	- 40	+ 85	°C
Storage Temperature	$T_{STG}$	- 40	+ 100	°C
Lead Solder Temperature *	$T_{SLD}$		+ 260	°C

\* must be completed within 10 seconds

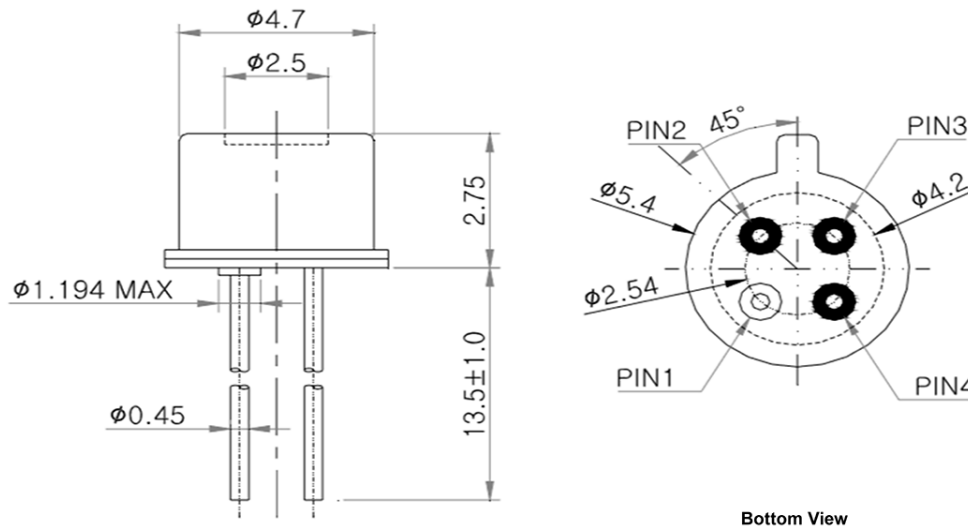
### Electro-Optical Characteristics $(T_{CASE}=25^{\circ}C)$

Parameter	Symbol	Test Conditions	Values			Unit
			Min.	Typ.	Max.	
Responsivity Range	$\lambda$		770	850	860	nm
Supply Voltage	$V_{CC}$		3.0	3.3	3.6	V
Supply Current	$I_{CC}$		20	25	32	mA
Sensitivity	$S$	BER= $1 \times 10^{-12}$ PRBS= $2^{31}-1$ at 2.5Gbps	-20	-22		dBm
Differential Output Power	$V_{O,diff}$			210	270	mV <sub>PP</sub>
3dB Bandwidth	$f_{h,-3dB}$	$P_{ave}=-30dBm, \lambda=850nm$		1.5		GHz
Low Frequency Cutoff	$f_{l,-3dB}$			70	115	KHz
Rise / Fall Time	$t_R / t_F$	$P_{ave}=-12dBm, \lambda=850nm$		130		ps
Output Resistance	$R_o$	Single-ended	40	50	60	$\Omega$



## Outline Dimensions

TO-46 with flat window



All Dimensions in mm

## Electrical Connection

Lead	Description
PIN 1	GND
PIN 2	V <sub>OUT</sub> +
PIN 3	V <sub>CC</sub>
PIN 4	V <sub>OUT</sub> -

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