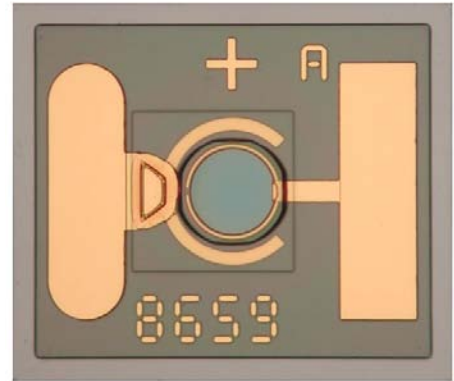


PDCS70T-GS

10 Gb/s GaAs PHOTODIODE

PDCS70T-GS is a high-speed GaAs photodiode chip with a dual-pad layout and an optical aperture with a diameter of 70 μm allowing easy coupling to multi-mode fibers. The top-illuminated p-i-n photodiode structure is optimized for multi-mode fiber based data- and telecom applications up to 12 Gb/s and offers an excellent responsivity and high speed of response in the wavelength region from 830 to 860 nm. The device has a low capacitance and achieves full speed at low bias voltages.



BENEFITS

- Volume production
- Dual-pad layout
- Optimized for multi-mode fiber based data
- Low capacitance

FEATURES

- Top illuminated 10 Gb/s GaAs photodiode, combining a large optical aperture with a low chip capacitance
- High responsivity of 0.6 A/W @ 850 nm
- Large optical aperture of 70 μm
- Low capacitance: < 240 fF
- Low dark current: < 1 nA
- Low bias voltage: 1.5 V
- Operating temperature range: -40 to 85 $^{\circ}\text{C}$

APPLICATIONS

- 10G Ethernet / Fiber Channel

The photodiode is manufactured with a low reflectivity AR coating, providing low back reflection and high return loss over the specified wavelength range. The chip is available with a pad metallization optimized for wire-bonding with the pads positioned to enable easy and direct bonding to any TIA layout. In addition, the small chip footprint saves valuable space in small packages such as TO-46.

CHARACTERISTICS (T = 25° C)

Parameter	Sym	U_R	Min	Typ	Max	Unit
Responsivity $\lambda = 850 \text{ nm}$	R	2.5 V		0.6		A/W
Dark current T = 25 °C T = 85 °C	I_D	5 V		1	5 100	nA
Bandwidth	B	2.5V	8	10		GHz
Total capacitance	C	3 V			240	fF

DIMENSIONS

Parameter	Min	Typ	Max	Unit
Aperture		70		μm
Chip length	340	350	360	μm
Chip width	290	300	310	μm
Chip thickness	145	150	155	μm

For more information
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