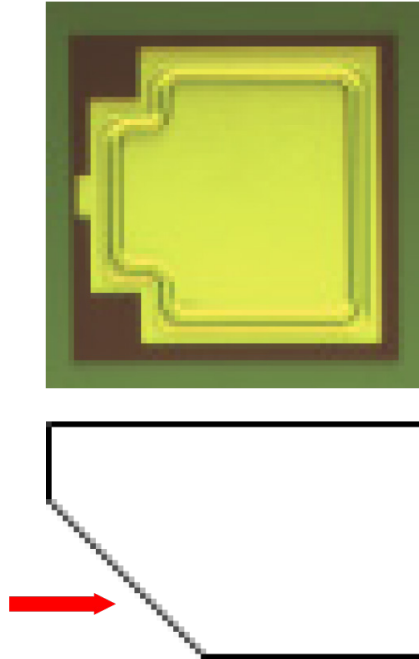


EDGE-ILLUMINATED SELF-HERMETIC MONITOR PHOTODIODE (EMPD) CHIP

INO00AA10D102



FEATURES

- Edge-illuminated InGaAs monitor photodiode with a nominal active area of $210\ \mu\text{m} \times 210\ \mu\text{m}$
- Operating temperature $-40\ ^\circ\text{C}$ to $90\ ^\circ\text{C}$
- Qualified according to GR-468 for use in non-hermetic packages
- Extremely low dark current with high reliability
- Response to 1270 - 1620 nm with typical responsivity of 0.8 A/W at 1310 nm
- RoHS compliant

SHIPPING REQUIREMENTS

- Diced wafer on UV tape with grip ring $\varnothing 150\ \text{mm}$

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Electro-Optical Characteristics

Operating conditions: Top= -40° to 90°C

Parameters	SYM	Conditions	Min.	Typ.	Max.	Units
Responsivity ¹⁾	R	VR = 1.2 to 5 V, $\lambda = 1310$ nm		0.8		A/W
Dark Current	ID	VR = 5 V, T = 25 °C		1	2	nA
Dark Current	ID	VR = 5 V			120	nA
Breakdown Voltage	VBD	IR = 100 μ A		50		V
Capacitance	C	VR = 5 V, f = 1 MHz, T = 25 °C		5	10	pF

¹⁾ Responsivity to be checked on top or bottom illuminated parts processed from the same wafer. 9/10 samples of each wafer need to pass.

Absolute Maximum Ratings

Reverse Bias Voltage	Vr	10	V
Reverse Current	Ir	10	mA
Forward Current	If	10	mA

Environmental Exposure Ratings

Operating Temperature	Top	-40 to 90	°C
Storage Temperature	Tstg	-40 to 120	°C
ESD threshold (HBM)	VESD_th	300	V

Caution! ESD sensitive device



Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute Maximum Rating conditions is not implied.



RoHS status based on EU RoHS Directive 2011/65/EU (at time of this document revision). The information in this publication is believed to be accurate and reliable. However, no responsibility is assumed by Coherent Compound Semiconductors Ltd for its use, nor for any infringement of patents, or other rights of third parties, resulting from its use. No license is granted by implication or otherwise under any patent or patent rights of Coherent Compound Semiconductors Ltd. Coherent Compound Semiconductors Ltd reserves the right to change component circuitry, recommended application circuitry and specifications at any time without prior notice.

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Chip Dimensions

	Parameter	Min	Nom	Max	Unit
A	Chip Size (length & width)	275	300	325	µm
B	Chip Thickness	160	185	210	µm
C	Active Area Size (length & width)	205	210	215	µm
D	Bond Pad Opening	175	185	195	µm

RoHS Compliance

Coherent is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

Ordering Information

Product Code	Wavelength	Description	Shipment Packaging
INO00AAD102	1270 - 1620 nm	EMPD Die	Diced wafer on Grip ring ⁽¹⁾

⁽¹⁾ Full diced 3" wafer on UV tape on grip ring Ø 150mm (standard high volume)

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Coherent before they become applicable to any particular order or contract. In accordance with the Coherent policy of continuous improvement specifications may change without notice. Further details are available from any Coherent sales representative.