



InGaAs Direct SWIR VIEWer (DIRVIEW)

DIV0320P10G-17-C: 3.2 mm x 3.2 mm Effective Viewing Area

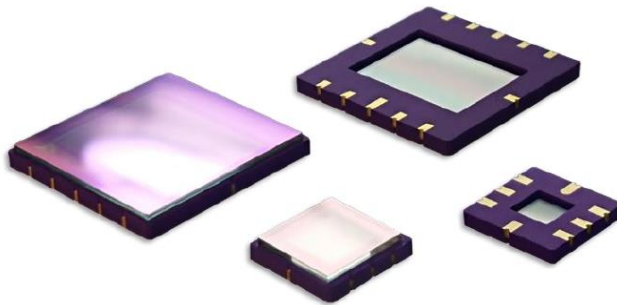
DIV1280P10G-17-C: 12.8 mm x 9.6 mm Effective Viewing Area

FEATURES

- SWIR-to-Green Optical Upconversion
- 0.9 μm - 1.7 μm SWIR Detection Range
- Eye-Sensitive Green Emitter Array
- Macroscopic Area Operability $\geq 99\%$
- Max. Conversion Efficiency $\geq 1\%$ W/W
- Minimum Detectable Power Densities $\leq 100\ \mu\text{W}/\text{cm}^2$
- High-Speed Image Response
- Ceramic LCC Package
- Low Voltage (3V) Operation

APPLICATIONS

- Fiberoptic Testing
- Laser Beam Detection & Analysis
- Microscopy
- See-through Silicon
- Fire Detection
- High Speed SWIR Image



GENERAL DESCRIPTIONS

PARAMETER	UNIT	DIV0320P10G-17-C	DIV1280P10G-17-C
		VALUE	
Sensor Technology	--	Planar InGaAs PIN (0.9 – 1.7 μm) Array	
Emitter Technology	--	InGaN Green LED Array	
Pixel Pitch	μm	10	
Image Size	mm	3.2 x 3.2	12.8 x 9.6
Package Type	--	Ceramic 8LCC	Ceramic 12LCC
Package Size L x W x T	mm	8 x 8 x 1.15	18 x 18 x 1.45
Weight	g	0.32	1.68



SPECIFICATIONS ($T_{AMB} = 23^{\circ}\text{C}$, $V_{POS} = 3\text{V}$)

MODEL NO.		DIV0320P10G-17-C			DIV1280P10G-17-C		
SPECTRAL RANGE (μm)		0.9 – 1.7					
PARAMETER	UNIT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
Dark Current	μA	---	0.1	0.5	---	1	5
Capacitance @ 1 MHz	nF	---	0.4	1.0	---	2.4	6.0
Responsivity @ $1.55 \mu\text{m}$ ¹	A/W	0.85	0.95	---	0.85	0.95	---
Quantum Efficiency, QE @ $1.55 \mu\text{m}$ ¹	%	68	76	---	68	76	---
Saturation Power @ $1.55 \mu\text{m}$, -0.2 dB ²	mW	0.2	0.5	---	0.2	0.5	---
Max. Conversion Efficiency, CE @ $0.53 \mu\text{m}$ / $1.55 \mu\text{m}$ ³	W/W%	0.9	1.5	---	0.9	1.5	---
	ph/ph%	0.3	0.5	---	0.3	0.5	---
Macroscopic Area Operability @ $0.53 \mu\text{m}$ / $1.55 \mu\text{m}$ ⁴	%	99	99.5	---	99	99.5	---

¹ Data taken with optical input lower than saturation level.

² Data measured at the aperture centre with an $1/e^2$ beam diameter of 1 mm.

³ CE is input optical power dependent.

⁴ Percentage of area with green emission intensity higher than 50% of non-saturated maximal value. The device illuminated by an uniform light source and this operability is the aerial yield analogous to visual perception.

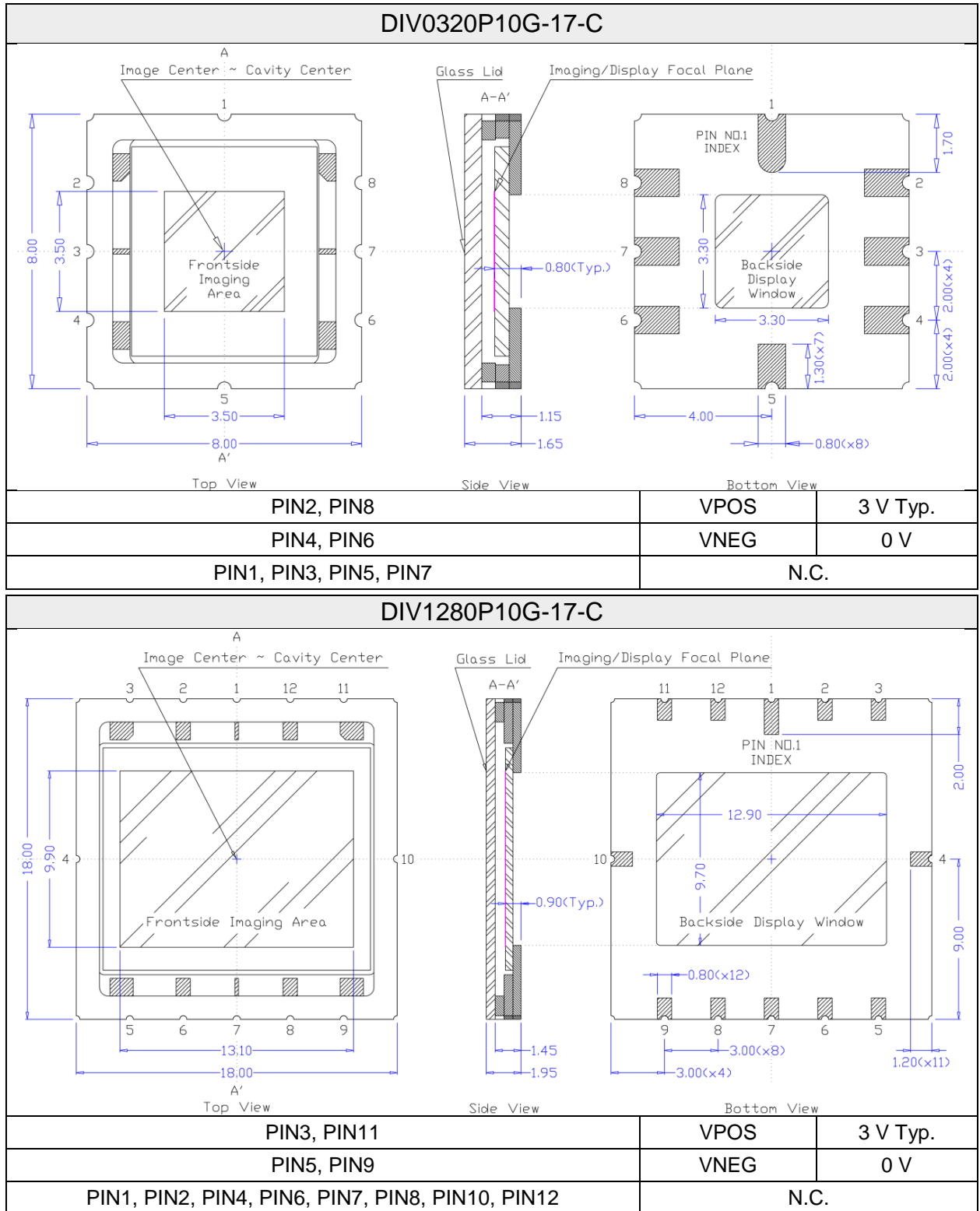
ABSOLUTE MAXIMUM RATINGS

MODEL NO.		DIV0320P10G-17-C		DIV1280P10G-17-C	
PARAMETER	UNIT	MIN.	MAX.	MIN.	MAX.
VPOS	V	+2	+5	+2	+5
IPOS	mA	---	5	---	5
Operating Temperature	$^{\circ}\text{C}$	-20	+70	-20	+70
Storage Temperature	$^{\circ}\text{C}$	-20	+70	-20	+70
Manual Soldering Condition ⁵		320 $^{\circ}\text{C}$ / 3 sec max. for each pad			

⁵ The device contains indium-based alloy. Prolonged heating at elevated temperatures may result in deterioration of the device performance.

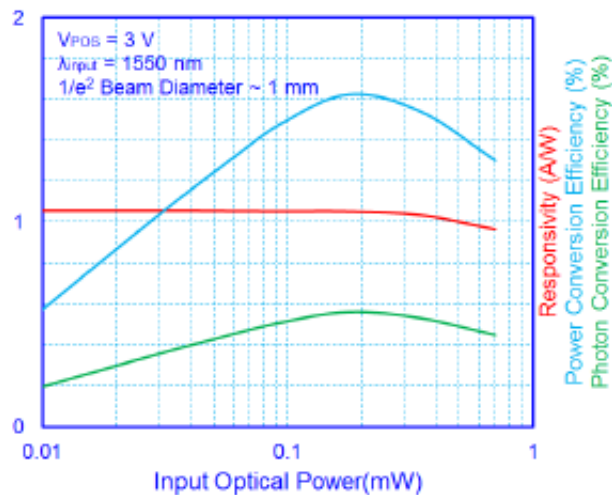
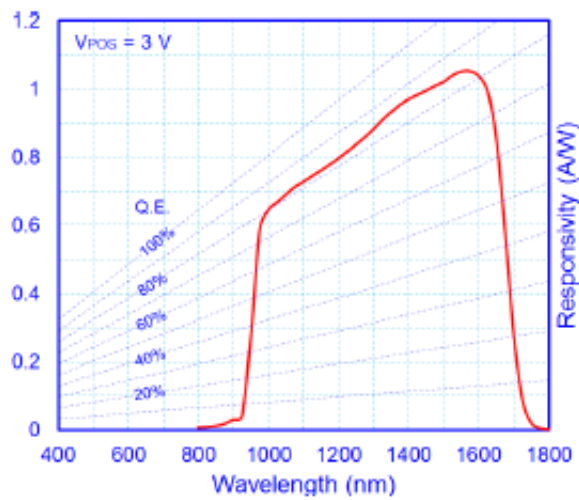
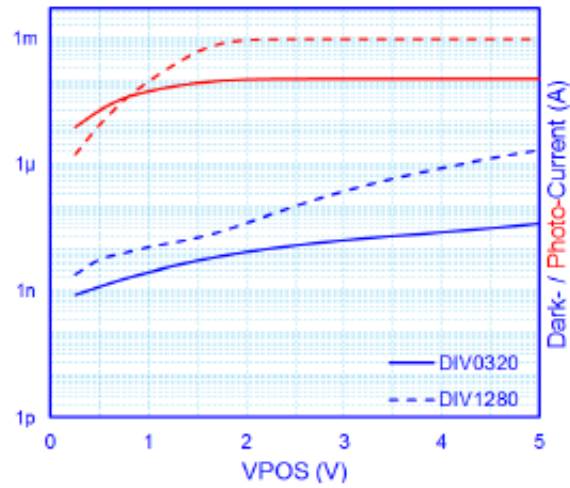


PACKAGE OUTLINE (Unit: mm)





EXAMPLE CURVES ($T_{AMB} = 23^{\circ}\text{C}$)



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