



InGaAs DIRECT SWIR VIEWER (DIRVIEW®)

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

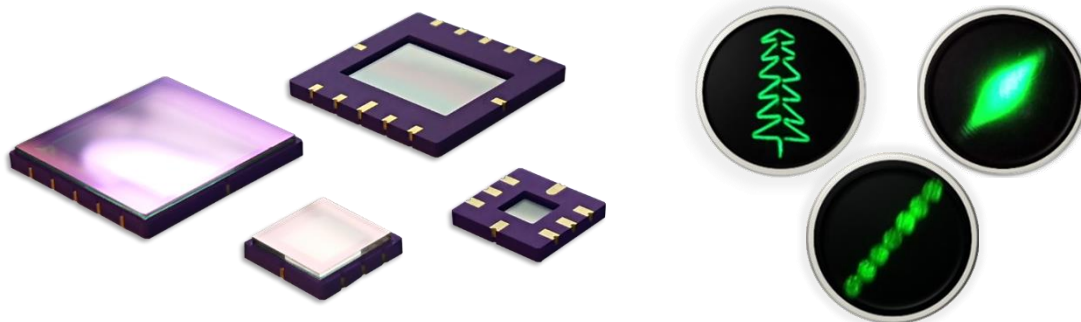
DIV1280P10G-17-C: 12.8mm x 9.6mm Effective Viewing Area

FEATURES

- SWIR-to-Green Optical Upconversion
- 0.9 μ m-1.7 μ m SWIR Detection Range
- Eye-Sensitive Green Emitter Array
- Macroscopic Area Operability $\geq 99\%$
- Max. Conversion Efficiency $\geq 1\%$ W/W
- Min. 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
- Imaging Powermeter
- 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 μ m) Array	
Emitter Technology	---	InGaN Green LED Array	
Pixel Pitch	μm	10	
Image Size	mm	3.2 x 3.2	12.8 x 9.6
Image Diagonal Length	mm	4.5	16
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 ($T_{AMB} = 23^{\circ}C$, $V_{POS} = 3V$)

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	---	0.01	0.5	---	0.1	1
Capacitance @ 1MHz	nF	---	2.0	3.0	---	25	35
¹ Responsivity @ 1.55 μm	A/W	0.85	0.95	---	0.85	0.95	---
¹ Quantum Efficiency, QE @ 1.55 μm	%	68	76	---	68	76	---
² Saturation Power @ 1.55 μm , -0.2 dB	mW	0.2	0.5	---	0.2	0.5	---
³ Max. Conversion Efficiency, CE @ 0.53 μm / 1.55 μm	W/W	0.9%	1.5%	---	0.9%	1.5%	---
	ph/ph	0.3%	0.5%	---	0.3%	0.5%	---
⁴ Macroscopic Area Operability @ 0.53 μm / 1.55 μm	%	99	99.5	---	99	99.5	---

¹. Data taken with optical input lower than the saturation level.
². Data measured at the aperture center with an $1/e^2$ beam diameter of ~ 1 mm.
³. CE is input optical power dependent.
⁴. The emission of DIRVIEW, which is illuminated by an uniform light source, is evaluated by a CMOS image sensor (CIS). The Macroscopic Area Operability is defined as the percentage of pixels of CIS with pixel value deviation within $\pm 15\%$ of the mean value in the area of interest. This operability is the areal yield analogous to visual perception.

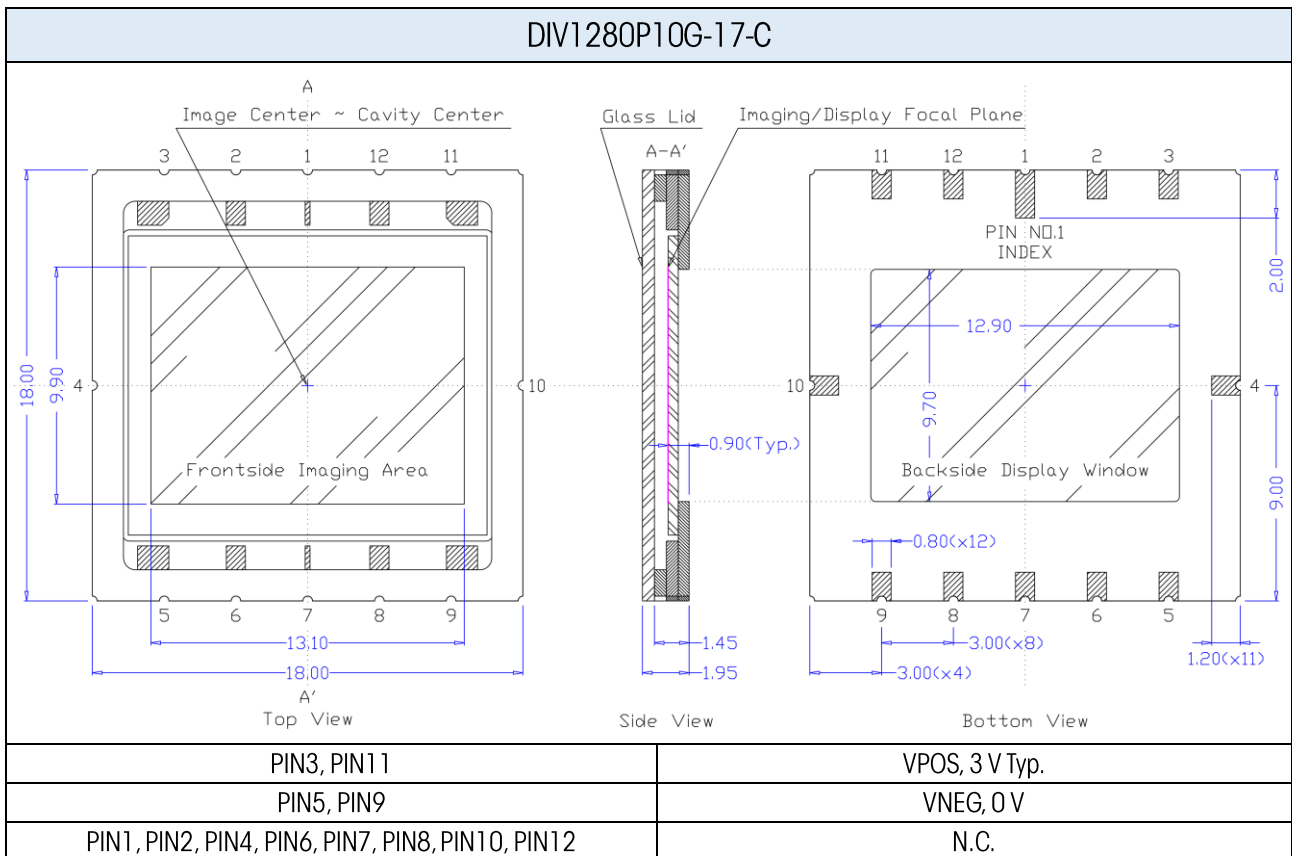
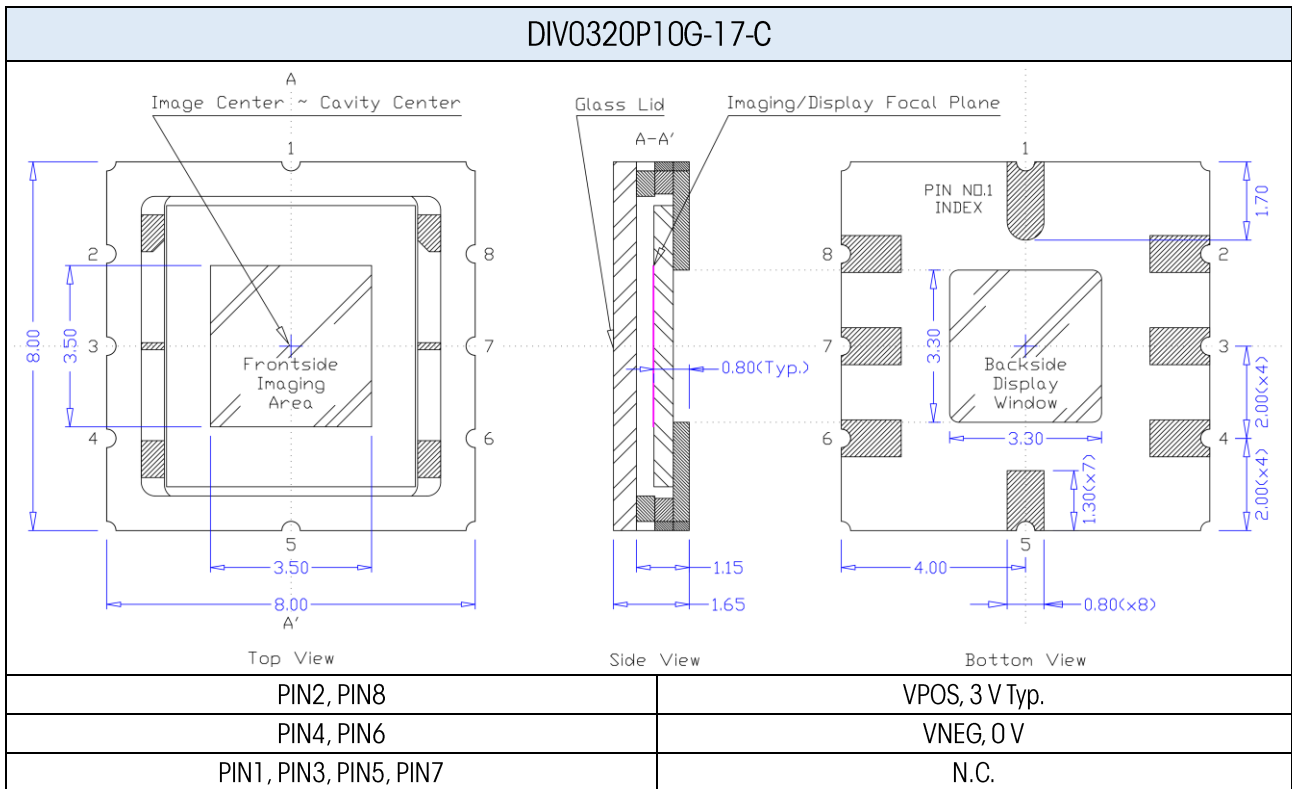
ABSOLUTE MAXIMUM RATINGS

Model No.		DIV0320P10G-17-C		DIV1280P10G-17-C	
Parameter	Unit	Min.	Max.	Min.	Max.
VPOS	V	+2	+5.5	+2	+5.5
IPOS	mA	---	5	---	5
Operating Temperature	$^{\circ}C$	-20	+70	-20	+70
Storage Temperature	$^{\circ}C$	-20	+70	-20	+70
⁵ Manual Soldering Condition	320 $^{\circ}C$ / 3sec max. for each pad				

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

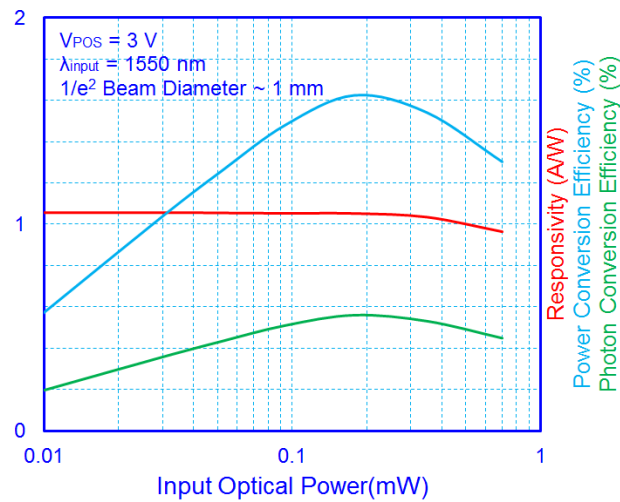
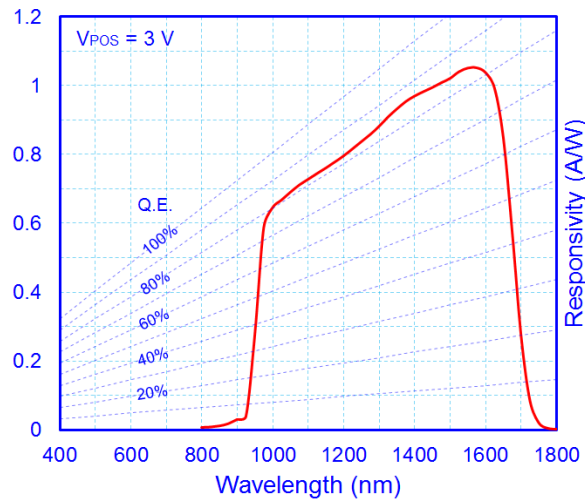
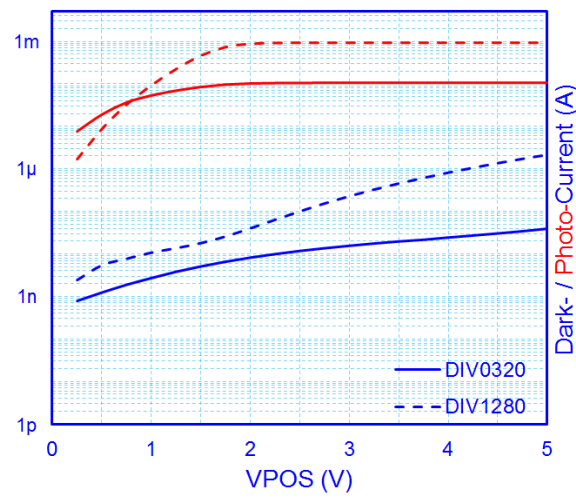


PACKAGE OUTLINE (UNIT: mm)





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



Note: The example curves are subject to change without notice.