



## InGaAs DIRECT SWIR VIEWER (DIRVIEW<sup>®</sup>)

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

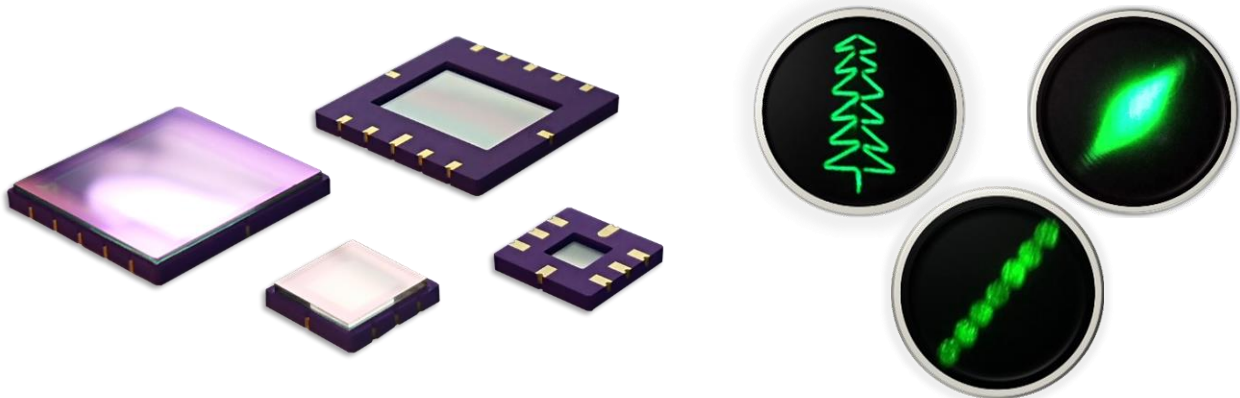
DIV1280P10G-17-C: 12.8mm x 9.6mm Effective Viewing Area

### FEATURES

- SWIR-to-Green Optical Upconversion
- 0.9 $\mu$ m-1.7 $\mu$ 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
- 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 $\mu$ m) Array	
Emitter Technology	---	InGaN Green LED Array	
Pixel Pitch	$\mu$ m	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 (  $T_{AMB} = 23^{\circ}C$ ,  $V_{POS} = 3V$  )

Model No.		DIV0320P10G-17-C			DIV1280P10G-17-C		
Spectral Range ( $\mu m$ )		0.9 – 1.7					
Parameter	Unit	Min.	Typ.	Max.	Min.	Typ.	Max.
Dark Current	$\mu A$	---	0.1	0.5	---	1	5
Capacitance @ 1MHz	nF	---	0.4	1.0	---	2.4	6.0
<sup>1</sup> Responsivity @ 1.55 $\mu m$	A/W	0.85	0.95	---	0.85	0.95	---
<sup>1</sup> Quantum Efficiency, QE @ 1.55 $\mu m$	%	68	76	---	68	76	---
<sup>2</sup> Saturation Power @ 1.55 $\mu m$ , -0.2 dB	mW	0.2	0.5	---	0.2	0.5	---
<sup>3</sup> Max. Conversion Efficiency, CE @ 0.53 $\mu m$ / 1.55 $\mu m$	W/W%	0.9	1.5	---	0.9	1.5	---
	ph/ph%	0.3	0.5	---	0.3	0.5	---
<sup>4</sup> Macroscopic Area Operability @ 0.53 $\mu m$ / 1.55 $\mu m$	%	99	99.5	---	99	99.5	---

<sup>1</sup>. Data taken with optical input lower than the saturation level.  
<sup>2</sup>. Data measured at the aperture center with an  $1/e^2$  beam diameter of 1 mm.  
<sup>3</sup>. CE is input optical power dependent.  
<sup>4</sup>. Percentage of area with green emission intensity higher than 50% of non-saturated maximal value. The device is illuminated by an uniform light source and this operability is the areal yield analogous to visual perception.

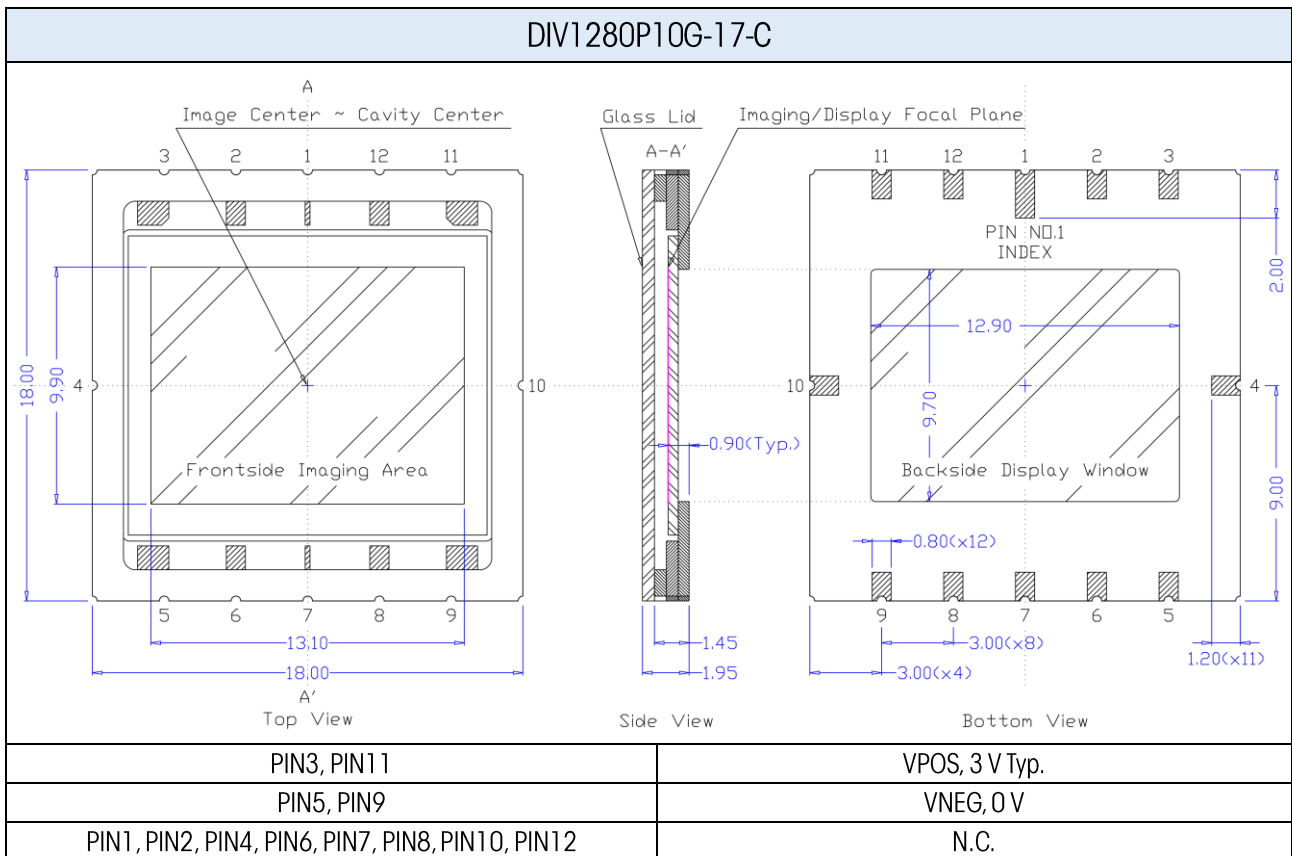
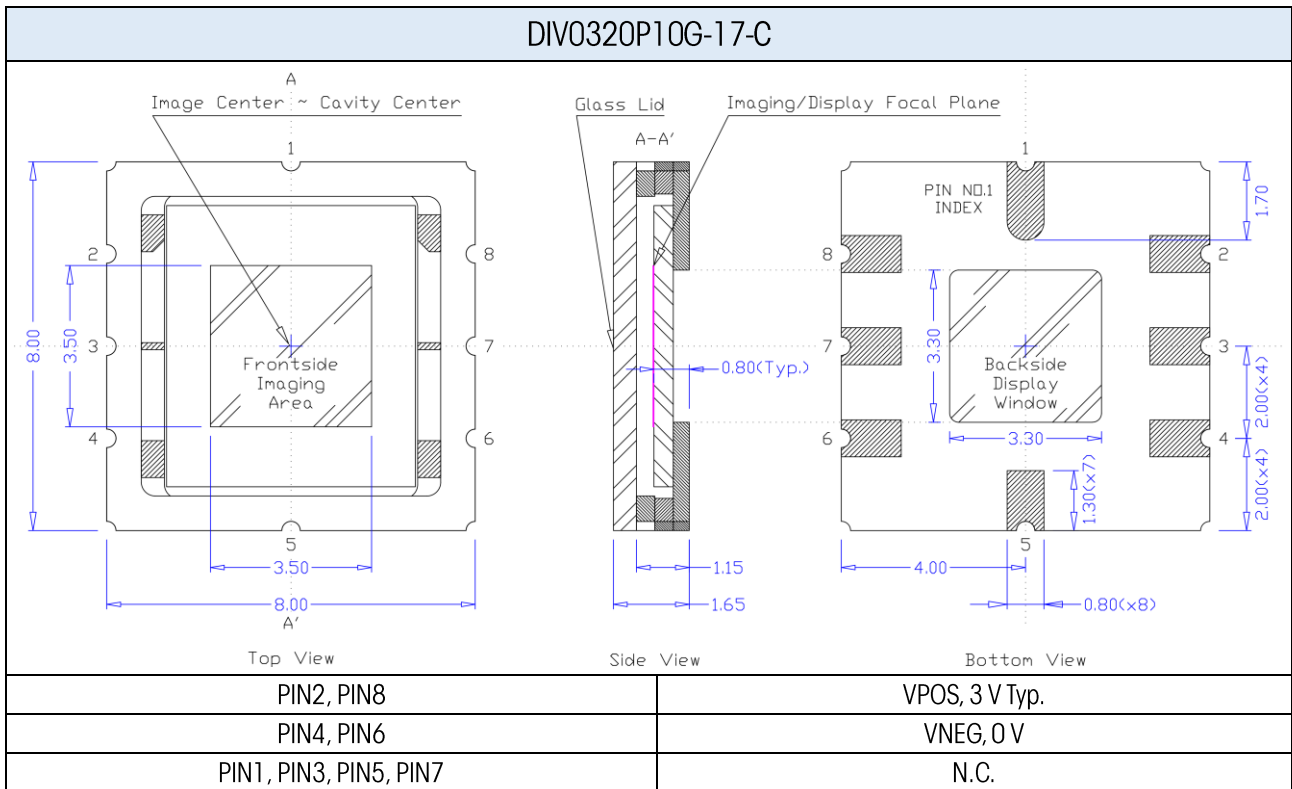
ABSOLUTE MAXIMUM RATINGS

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

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

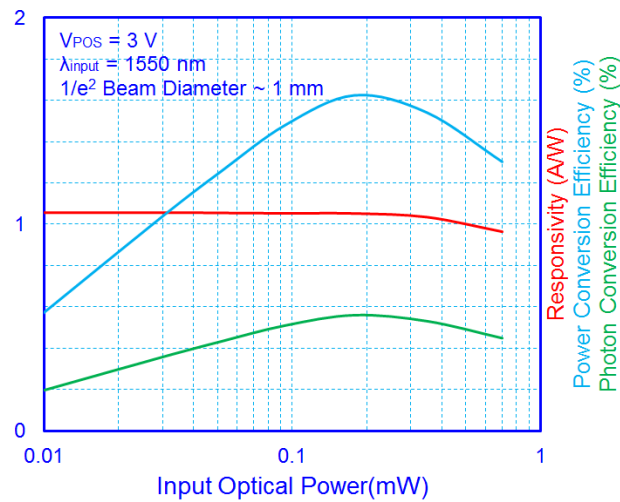
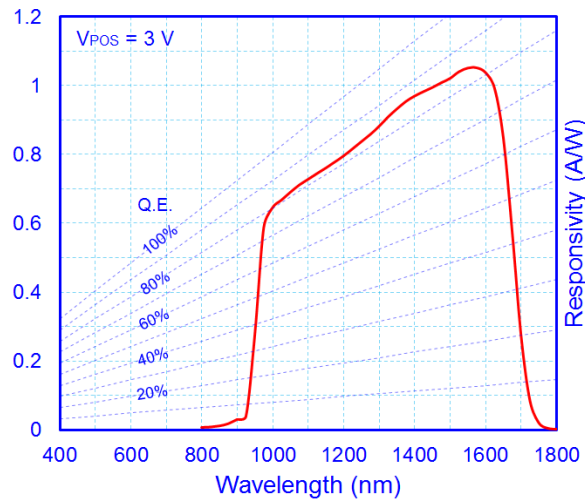
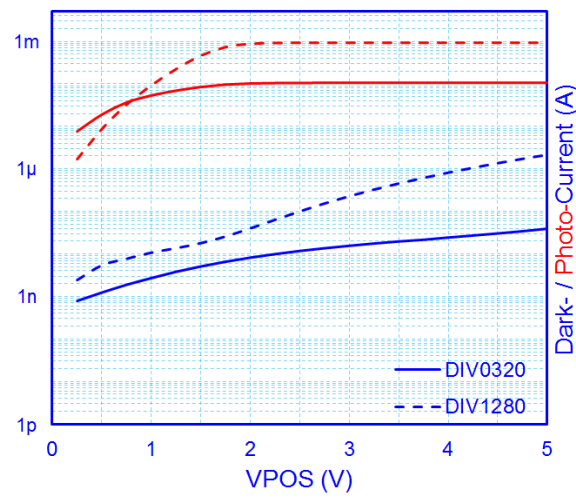


PACKAGE OUTLINE (UNIT: mm)





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



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