

10 Gbps 850 nm PIN (Preliminary)

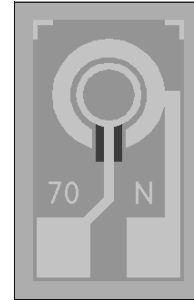
MG5A-7070

Part Number: MG5A-7070

Applications: 10 Gbps

Absolute Maximum Ratings (T = 25°C):

Parameter	Symbol	Unit	Value
Forward Current	I_F	mA	10
Reverse Voltage	V_R	V	40
Reverse Current	I_R	mA	1
Operating Temperature	T_{op}	°C	0 - 90
Storage Temperature	T_{stg}	°C	-40 - 100



Electro-optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Aperture	D	μm		70		
Responsivity	R	A/W	0.58	0.62		$V_R = 5\text{ V}$ $\lambda = 850\text{ nm}$
Dark Current	I_D	nA		0.1	1.0	$V_R = 5\text{ V}$
Breakdown Voltage	V_B	V	50			$I_R = 1\ \mu\text{A}$
Capacitance	C	pF		0.22	0.25	$V_R = 2\text{ V}$ $f = 1\text{ MHz}$
Peak Wavelength	λ	nm		850	860	
Rise/Fall Time	τ_r/τ_f	ps			40	$V_R = 2\text{ V}$ 20-80%, $R_L = 50\ \Omega$
Cut-off Frequency	f_c	GHz	8.5			$V_R = 2\text{ V}$ $R_L = 50\ \Omega$

Chip configuration:

- Both anode and cathode contacts on top (epi) surface.
- Dimension: 250 μm (width) x 400 μm (length) x 130 μm (thickness)
Tolerance: +/-12.5μm
- Bond pad size: 70 x 80 μm square