



## High Speed InGaAs p-i-n Photodiode

### 13PD100-S

The 13PD100-S, an InGaAs photodiode with a 100 $\mu$ m-diameter photosensitive region mounted on a metallized ceramic substrate, is the largest standard device enabling a 1 GHz frequency cutoff. Planar semiconductor design and dielectric passivation provide low noise performance. Reliability is assured by a 100% purge burn-in (200°C, 15 hours,  $V_r = 20V$ ). Chips can be attached and wire bonded to standard submounts, customer-supplied submounts or other specified packages.

### Features

Planar Structure  
Dielectric Passivation  
100% Purge Burn-In  
High Responsivity

Device Characteristics					
Parameters	Test Conditions	Min	Typ	Max	Units
Operating Voltage	-	-	-	-20	Volts
Dark Current	-5V	-	0.5	2	nA
Capacitance	-5V	-	0.9	-	pF
Responsivity	1300nm	0.80	0.9	-	A/W
	1500nm	-	1.0	-	A/W
Rise/Fall	-	-	-	0.5	ns
Frequency Response	(-3dB)	-	1.0	-	GHz
Absolute Maximum Ratings					
Reverse Voltage					30 Volts
Forward Current					5 mA
Reverse Current					500 $\mu$ A
Operating Temperature				-40°C to + 85°C	
Storage Temperature				-40°C to + 85°C	
Soldering Temperature				250°C	