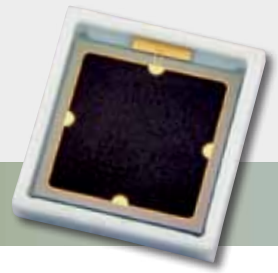


Large Area Si-APDs – UV-Enhanced APDs

Applications

- Radiation detection
- Environmental monitoring
- Fluorescence detection
- High energy physics
- Particle physics
- Instrumentation

Features and Benefits

- High quantum efficiency
- Low dark currents
- Easy coupling to scintillator crystals
- Immunity to electromagnetic fields
- Short wavelength enhanced responsivity
- Custom packaging available
- Excellent timing resolution
- Application specific designs
- RoHS compliant available

Product Description

The C30739ECERH Silicon Avalanche Photodiode (APD) is intended for use in a wide variety of broadband low light level applications covering the spectral range from below 400 to over 700 nanometers. It has low noise, low capacitance and high gain. It is designed to have an enhanced short wavelength sensitivity, with quantum efficiency of 60 % at 430 nm.

The standard ceramic carrier package allows for easy handling and coupling to scintillating crystals such as LSO and BGO.

The C30626FH and C30703FH series are large area Si APDs in flat pack packages for either direct detection or easy coupling to scintillator crystals.

The C30626 uses a standard reach through structure and has peak detection at about 900 nm. The C30703 is enhanced for blue wavelength response and has peak quantum efficiency at ~ 530 nm.

These APDs are packaged in square flat pack with or without windows or on ceramics. The no-window devices can detect direct radiation of X-rays and electrons at the energies listed, and the windowed packages are best for easy scintillator coupling.

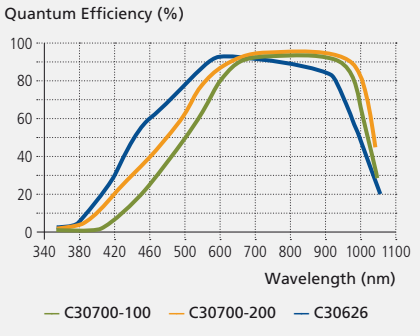
Product Table

Large Area Si-APDs – UV-Enhanced APDs

Part Number	Photo Sensitive Diameter	Responsivity	Dark Current	Spectral Noise Current	Capacitance @100 KHz	Response Time	NEP	Vop Range
Unit	mm	A/W	nA	pA/√Hz	pF	ns	fW/√Hz)	V
C30626FH	5x5	22 (@900 nm)	250	0.5	30	5	23 (@900 nm)	275 - 425
C30703FH	10x10	16 (@530 nm)	10	0.7	120	5	40 (@530 nm)	275 - 425
C30739ECERH	5.6x5.6	20 (@430 nm)	50	1.4	60	2	-	275 - 425

Graph 1

Quantum Efficiency vs. Wavelength



Graph 2

Quantum Efficiency vs. Wavelength