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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

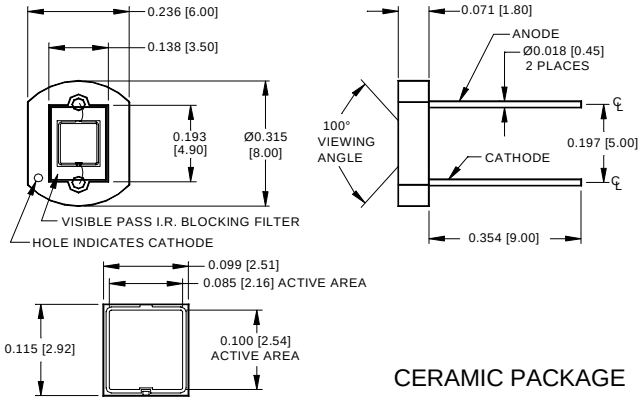
Applications of "Embedded - Microcontrollers"

Details	
Product Status	Active
Core Processor	PIC
Core Size	8-Bit
Speed	20MHz
Connectivity	-
Peripherals	Brown-out Detect/Reset, POR, PWM, WDT
Number of I/O	5
Program Memory Size	1.75KB (1K x 14)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	64 x 8
Voltage - Supply (Vcc/Vdd)	2V ~ 5V
Data Converters	-
Oscillator Type	Internal
Operating Temperature	-40°C ~ 125°C (TA)
Mounting Type	Surface Mount
Package / Case	8-SOIC (0.154", 3.90mm Width)
Supplier Device Package	8-SOIC
Purchase URL	https://www.e-xfl.com/product-detail/microchip-technology/pic12hv609-e-sn

PHOTONIC DETECTORS INC.

Silicon Photodiode, Visible Light Detector
Type PDV-V417

PACKAGE DIMENSIONS INCH [mm]



CERAMIC PACKAGE

ACTIVE AREA = 5.44 mm^2

FEATURES

- Visible response
- Low dark current
- Good linearity
- Low noise

DESCRIPTION

The **PDV-V417** is a silicon PIN photodiode, with a built in visible pass, I.R. blocking optical filter. Housed in a black ceramic package with two leads. Designed for photovoltaic operation with 0 volt bias.

APPLICATIONS

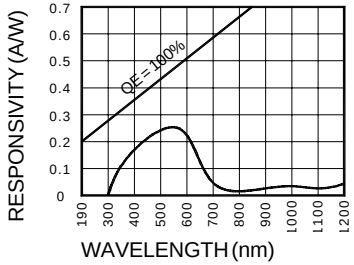
- Camera exposure meter
- Light meters
- Visible detector

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		10	V
T_{STG}	Storage Temperature	-20	+80	°C
T_O	Operating Temperature Range	-20	+60	°C
T_S	Soldering Temperature*		+240	°C
I_L	Light Current		0.5	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	5	6.5		μA
I_D	Dark Current	H = 0, V_R = 1 V		3	10	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	1.0	1.5		GΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		650		pF
λrange	Spectral Application Range	Spot Scan	320		730	nm
λp	Spectral Response - Peak	Spot Scan		560		nm
V_{BR}	Breakdown Voltage	I = 10 μA	10	15		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$5x10^{-14}$		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 10 V		500		nS

 **f = 1 MHz