

CHEETAH

RUGGEDIZED CAMERA SERIES

Front View

Rear View

C2820

CMOS 8.1 MP

GigE Vision® with Power over Ethernet (PoE)

PRELIMINARY

Imperx: C2820

The POE-C2820 ultraviolet camera features the Sony Pregius S™ IMX487 Global Shutter CMOS sensor with a native resolution of 2856 x 2848 in a 2/3" optical format capturing images in the UV spectral range from 200 nm to 400 nm and delivering up to 14.8 frames per second with GigE Vision® Power over Ethernet (PoE) output. The Pregius S technology uses a stacked back-illuminated pixel structure with or without a double A/R coated quartz glass window offering reduced pixel size, and quantum efficiency similar to the popular ICX407(UV) image sensor. The C2820's flexibility, image quality, and speed make it suitable for a broad range of diverse and demanding applications, but "one size doesn't fit all," and Imperx can help optimize the camera to your exact requirements.

Specifications

Feature	Description	Feature	Description
Output Interface	GigE Vision® with Power over Ethernet (PoE)	Strobe Output	2 strobes, programmable position and duration
Resolution	2856 (H) x 2848 (V)	Pulse Generator	Yes, programmable
Sensor	Sony Pregius S IMX487 CMOS Ultraviolet	Data Corrections	2 LUTs pre-programmed with Gamma 0.45, 2 LUTs pre-programmed with Negative LUT Bad pixel correction (static), Flat field correction
Spectral Range	200 nm–400 nm	Lens Mount	C-Mount (default)
Sensor Format	7.8 mm (H) x 7.8 mm (V), 2/3" optical format (11.1 mm diagonal)	P-Iris	Optional
Pixel Size	2.74 microns square	P-Iris Control	Auto, Programmable
Shutter	Global shutter (GS)	Supply Voltage Range	12 VDC (6 V – 30 V), 1.5 A inrush @ 12 V PoE (IEEE 802.3af / IEEE 802.3at)
Sensor Digitization	12-bit	Power Consumption	Typical: 3.96 W @ 12 V; PoE: 5.95 W
Frame Rate	14.8 fps (8-bit), 7.4 fps (10-bit/12-bit unpacked), 9.8 fps (10-bit/12-bit packed)	Camera Current	Typical: 330 mA @ 12 V
Dynamic Range	71 dB	Size - Width/Height/Length	37 mm (W) x 37 mm (H) x 61.6 mm (L)
Output Bit Depth	8, 10, 12-bit	Weight	125.2 g
Analog/Digital Gain	Manual, Auto; 0 dB – 48 dB, 480 steps	Vibration, Shock	20G (20 – 200 Hz XYZ)/100G
Digital Gain	1x (0 dB) to 4x (12 dB) with a precision of 0.001x	Environmental	-30 °C to +75 °C Operating (-40 °C to +85 °C tested) -40 °C to +85 °C Storage
Black Level Offset	Manual (0 – 4095), Auto	Humidity	10% to 90% non-condensing
White Balance	Manual, Auto, Once, Off	MTBF (Telcordia SR-332)	Not Specified ¹
Shutter Speed	26 µs to 16.0 s	Military Standard	MIL-STD-810G
Exposure Control	Off, Manual, Auto, External	Regulatory	FCC Part 15 Class A, CE, RoHS, UKCA
Regions of Interest (ROI)	2 ROI		
Binning	1x1, 2x2		
Sub-sampling	1x1, 2x2		
Trigger Inputs	External, Pulse generator, Software		
Trigger Options	Edge, Pulse width, Trigger delay, Debounce, Trigger over Ethernet		
Trigger Modes	Free run, Standard, Fast		
External Inputs/Outputs	2 IN (OPTO, LVTTTL) / 2 OUT (OPTO, TTL)		

¹ UV illumination inherently damages the image sensor increasing image sensor dark current with dose.

The amount of damage and the useful life of the image sensor is dependent upon the radiant power and duration. For more information, contact Imperx.

