

Dual Band Camera

Datasheet



PLI-CLD-CL



2555 US Route 130 South Suite 1
Cranbury NJ, 08512
(609) 495-2600
www.princetonlightwave.com

PLI-CLD-CL Version 2.0

Features

- Independent Visible and IR Sensing with Spatial and Temporal Correlation
- CCD Resolution: 2048 pixels
- PDA Resolution: 512 Pixels
- High Sensitivity and SNR Performance
- Dual CameraLink[®] Interface (Base Configuration)
- Data rate up to 60 Mpixels/Sec
- Flexible and Easy to Operate with Serial Commands:
 - ⇒ Exposure Time: 5 μ S to 32mS
 - ⇒ Analog Gain: 2 to 36dB
 - ⇒ Digital Gain: 0 to 6dB
 - ⇒ Output Format: CameraLink[®]- 8, 10, 12 bit data on 1 or 2 Outputs
 - ⇒ Trigger Modes: Free Run or External Trigger
- PRNU Field Correction
- Multi-Camera Synchronization
- Single Power Supply: 12 to 24 VDC

Note : camera sold without lens. The camera is supplied with an F mount (Nikon)



The camera consists of two sensors, one for visible spectrum imaging and one for IR spectral imaging. The sensors maintain an optical alignment to provide simultaneous sensing across the visible and IR spectrums. Each sensor provides two analog output streams, which are processed using correlated double sampling (CDS), dark level correction and analog gain. Finally, the streams are converted to 12-bit digital data and buffered unto dual-port RAM for synchronization and further digital processing. Two independent CameraLink interfaces are provided for transferring processed video streams to the user. Each CameraLink interface operates in the “base configuration” as defined by the CameraLink standard and support several programmable data rates as well as two channel (taps) or single multiplexed channel transfer. Data can be delivered as 12, 10, or 8 bit data.

The camera supports external triggering for multi-camera synchronization and external exposure time control.

The camera can be configured using simple serial commands allowing the setting of:

- * Integration
- * Signal gain
- * Trigger mode
- * Data rate and depth
- * PRNU correction
- * Contrast expansion

Typical Performance

Parameter	CCD (Visible)	PDA (IR)	Unit
	Value	Value	
Resolution	2048	512*	pixels
Pixel Size	14x14	56x200	um
Maximum Line Rate (1)	9.65	9.65	KHz
Output Format	8, 10, 12	8, 10, 12	bits
Output Pixel Rate	60	60	MP/S
Spectral Range	400-900	1100-1700	nm
Gain Range	2 to 36	0 to 36	dB
PRNU**	±1	±1	%+
Dynamic Range (2)	10.5	12	ENOB
Linearity	±5	±5	%
Sensor Alignment	x,y=±50, z=±30	x,y=±50, z=±30	um
Power Supply	12 to 24		VDC
Supply Current	<2.0		A
Power Dissipation	<15		W
Size (WxHxL)	102 x 77 x 93		mm
Operating Temperature	0 to 40		°C
Storage Temperature	-40 to 75		°C

Notes:

1) At maximum CameraLink® transfer rate of 60MP/S.

2) At minimum analog gain settings.

* PDA(IR) is a 2x256 detector array. Gap between arrays is 6 pixels

** With user correction



2555 US Route 130 South Suite 1
 Cranbury NJ, 08512
 (609) 495-2600
 www.princetonlightwave.com