PEMBROKE INSTRUMENTS, LLC

SWIR CAMERA DATA SHEET

LiSa SWIR 2048M STE2 DS 1.2 1.pdf

Manufacturer: New Imaging Technologies (NIT)

Technical data reproduced from the original manufacturer datasheet.

For a quote or more information email

sales@pembrokeinstruments.com

Ordering Informations

Commercial Reference

Commercial reference	Description	Ordering information
LiSa SWIR 2048 M-STE2	LineScan SWIR Cameralink Camera	9SEC2301AE31MC0# # : product revision

Included Accessories

- Power and trigger Cable (Hirose HR10 connector)
- 12V power supply
- Cardboard shipping and storage box

Optional Accessories

- Hardened protective case

Custom variants (OEM)

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Products are only warranted by NIT to meet NIT's production data sheet specifications.

FUNCTIONALITIES

Camera

Main camera features (For full documentation contact):

Sensor characteristics	Sensor type	InGaAs (0.9-1.7 spectral response)
	Pixel pitch	$8\mu m$
	Pixel height	$14\ \mu m$
	Resolution	2048x1
	Sensor noise	• High gain (CDS): <$90e^-$ • Medium: < $370e^-$ • Low: <$2200e^-$
	Dynamic range	• High gain (CDS): 55dB typical • Medium: 62dB typical • Low: 66dB typical
	Peak QE	>80%
Camera features	Frame rate	>110kHz Full resolution
	Sensor Readout	Global shutter ITR (Integrate Then Read) and IWR (Integrate While Read).
	Sensor modes	3 gain setting: High, Medium, Low
	Output data range	14 bit ADC – (4400DL effective data range)
	Output Type	Cameralink base 8/10/12/14 bits pixel formats. Configurable output geometry: 1X_1Y / 1X2_1Y / 1X3_1Y
	Exposure time	Minimum Integration time: 1us Controlled by camera register or Trigger width
	Trigger	Internal/External (LVTTL) Software Trigger Trigger over Cameralink
	Trigger delay	User-Selectable
	Partial reading mode	Region of Interest (ROI). User-Selectable with a step of 8 pixels. Maximum FPS increase with reduced ROI.
	AGC (Histogram Stretching)	Once/Manual. Once: Automatic selection of gain and offset by camera based on next captured line. Manual: User-Selectable gain and offset.
	NUC correction	Correction 1-Point or 2-Point. 2 Point factory calibrated. (25°C sensor Temperature)
	Bad pixel correction	Factory calibrated Bad Pixel Map
	File Management	Upload/Download via camera communication interface Firmware Update. Correction table (NUC and BPM) download and upload. File management software provided (Windows compatible)
	Temperature monitoring	Mainboard & Image Sensor
	User Configuration	4 User-defined presets. Selectable boot-up preset.
	Image Flip	Horizontal

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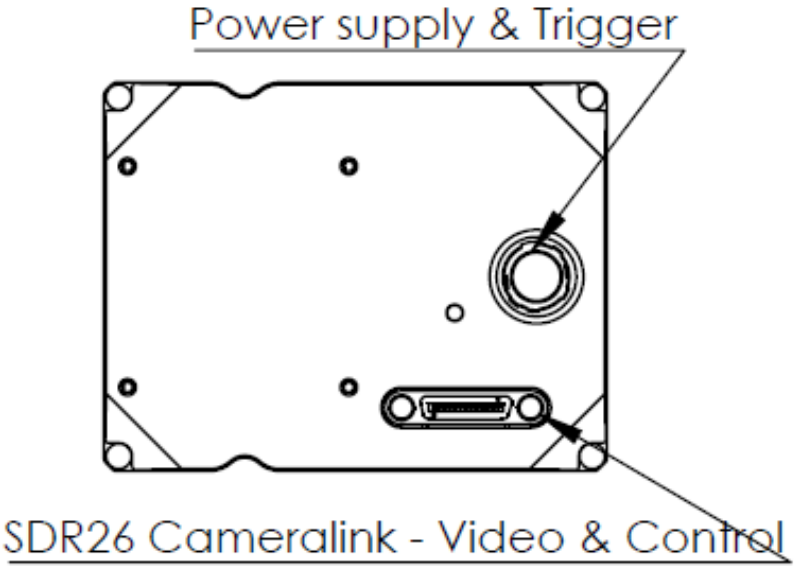
Environment and mechanical characteristics	Power consumption (12V supply)	• Camera: <4W
		• Cooling: User-Selectable TEC power limit
		  ○ Off
		  ○ Low : <1W
		  ○ Medium : <2W
		  ○ High : <5W (Default, user defined value)

	Supply voltage range	6 to 24V (Overvoltage, reverse polarity protection). POCL
	Storage temperature	-40 to +80°C
	Operating temperature	-40 to +71°C
	Size (WxHxL, mm)	45.4 x 75 x 58mm
	Weight	280g
	Lens mount	C-Mount
Software	Control protocol	GenCP (Genicam) compliant
	NIT Software	NITGenicamControlTool (Windows, camera control only)
	Third party	Genicam/GenCP compliant software

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Electrical ICD

Reference	Designation	Manufacturer
HR10-10R-12SA	Connector Female 12 positions	Hirose

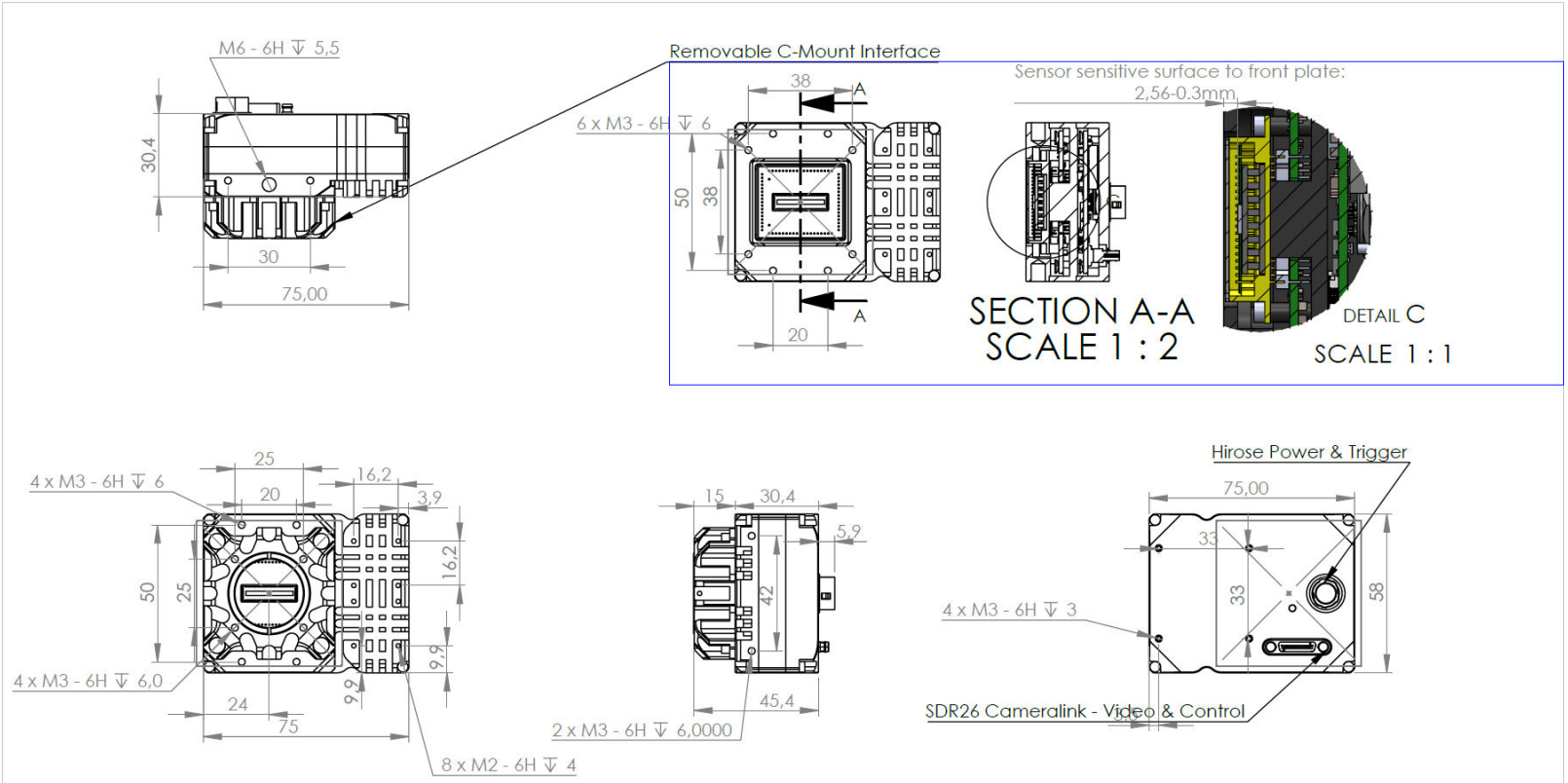


Reference	Designation	Manufacturer
12226-1150-00FR	SDR26 connector	3M

Hirose (HR10) Connector Pinout		
Pin	Signal Name	Cable color
1	Power (6-24V)	Red/Purple/(Orange)
2	Power GND	Blue/Brown
3	Trigger OUT2	White
4	Trigger OUT1	Yellow
5	NC	
6	NC	
7	Reserved	
8	Power GND	Blue/Brown
9	Power (6-24V)	Red/Purple/(Orange)
10	Trigger IN/OUT (LVTTL)	Green
11	Not connected	
12	Trigger GND	Black

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Mechanical ICD





Gen. Tol. : +/- 0.100000mm All dimensions are in mm		E				
Surface Finishing: Black Anodization		D				
Treatment:		C				
Material: Aluminium 7075		B				
Designer: MSC	A4	A	05/06/2025	Creation	Check	MSC
Date: 05/06/2025		Rev.	Date	Modification	Check	Author
1-4 impasse de la noisette, Bat D, 1er Etage, FRANCE - 91370 Verrières le buisson						SCALE 1:2
Tel : +33 1 64 47 88 58 www.new-imaging-technologies.com		Doc. Ref. : LiSa SWIR 2048 M-STE2			REV. A	SHEET 1/2

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