



USB3.0 Near Infrared (InGaAs) Camera

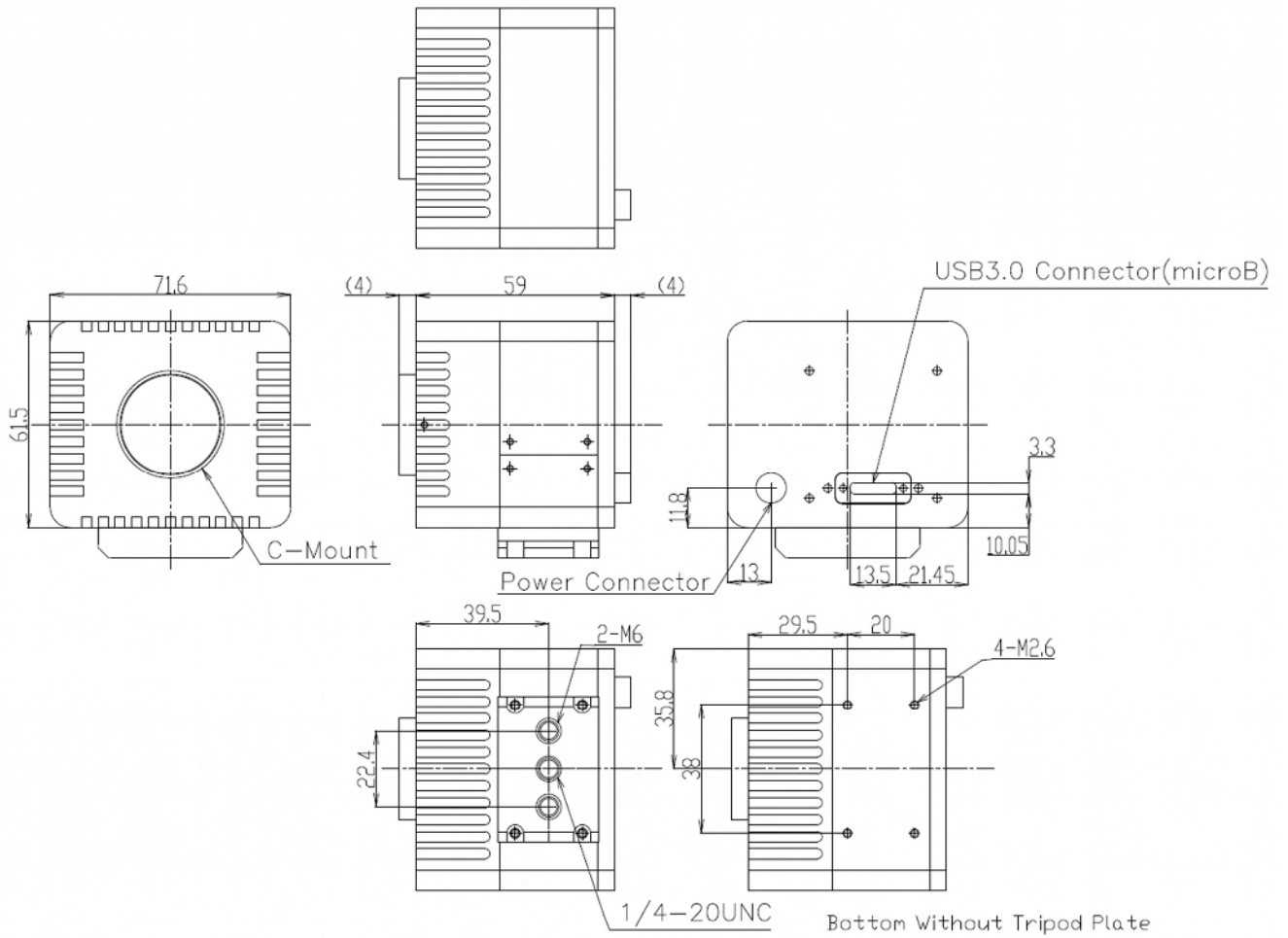
ARTCAM-130SWIR-USB3

INSTRUCTION BOOKLET

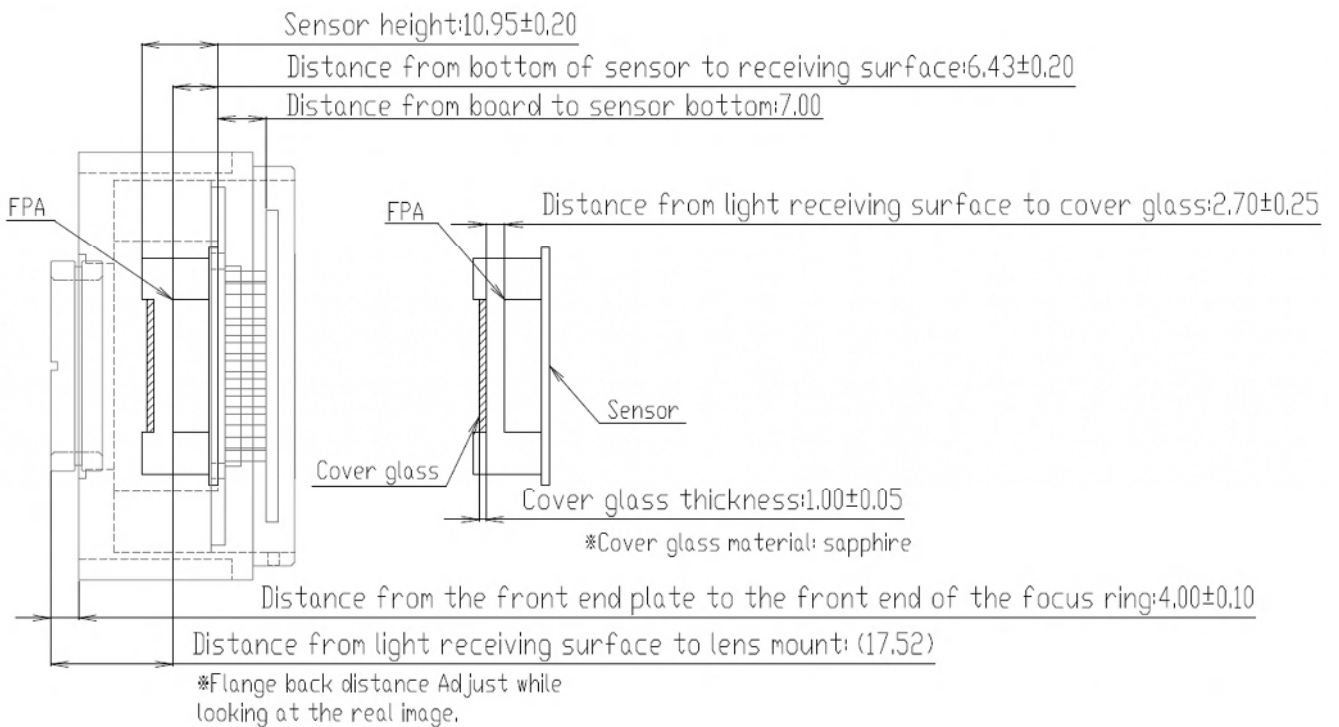
Specifications

ITEM	
Sensor Type	1.3 M pixels InGaAs Image Sensor
Interface	USB3.0 (Bulk transfer)
Number of Output Bits	13bit
Frame Rate	30 fps (When shutter speed is 1/1000000 sec)
Shutter Speed	1/1000000 ~ 1.04857sec
Synchronization System	Internal Synchronization
Lens Mount	C Mount
Power	DC12V External Input
Power Consumption	Approx.3W (During normal operation)
Ambient Conditions	Operating Temperature / Humidity : 10 ~ 35°C / 10 ~ 80% (Non-condensing) Storage Temperature / Humidity : 0 ~ 60°C / 10 ~ 95% (Non-condensing)
External Dimensions	61.5(W) × 71.6(H) × 59.0(D)mm * Lens, tripod and cables not included
Weight	Approx. 360g * Lens, tripod and cables not included

External Dimensions



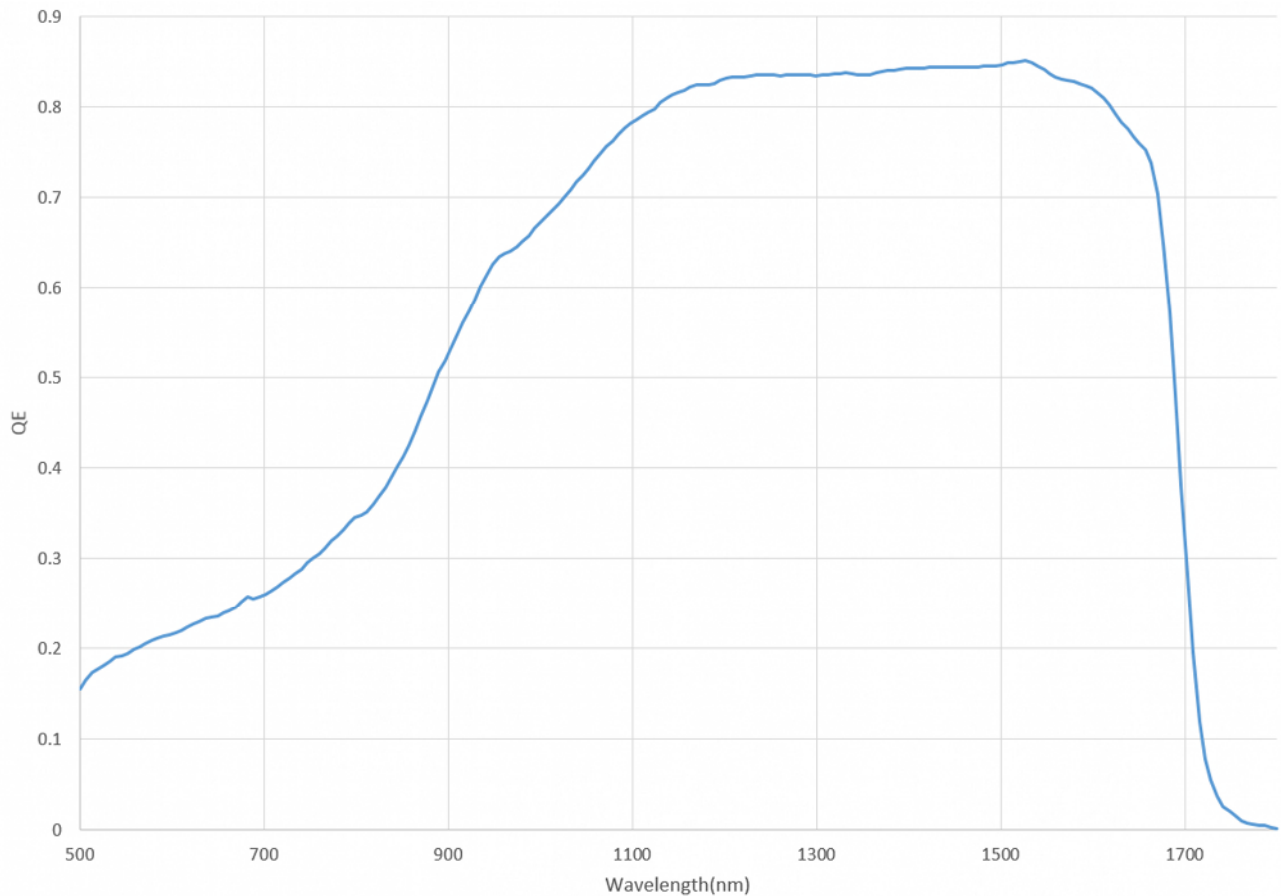
Sensor Surface Perimeter Dimension



Sensor specification (based on sensor manufacturer's data)

ITEM	
Image pickup device	SCD InGaAs sensor Cardinal1280
Number of effective pixels	1280(W) x 1024(H)
Number of output pixels	1280(W) x 1024(H)
Pixel Size	10[μ m] x 10[μ m]
Imaging Area	12.8[mm] x 10.24[mm] (Diagonal 17.173 mm, equivalent to approximately 1 inch)
Detection frequency band	400 to 1700 nm (whole) 800 to 1600 nm (quantum efficiency 35% or more) Peak wavelength: 1550 nm (quantum efficiency 80% or more)
Saturation capacity / readout noise	High Gain: 10Ke / 35e Mid Gain: 500Ke / 170e Low Gain: 1Me / 350e
A/D Resolution	13bit

Spectral sensitivity characteristics



Camera function

The functions of the camera are as follows.

NO	ITEM	SETTING RANGE	DEFAULT VALUE	REMARKS
1	Reset	-	-	Initialize the camera
2	Shutter Speed	1~1000000	100	Changing the shutter speed Shutter speed [μ sec] = set value * 100
3	Analog Gain	Low/Mid	Low	Cell capacity selection of sensor (High Gain cannot be selected)
4	Digital Gain	0~255 (0~7.97times)	32	Gain magnification = set value * 1/32 ON / OFF selectable
5	Offset	0~255	0	Offset = set value * 64 (14 bit value) ON / OFF selectable
6	Black Level Correction	ON/OFF	ON	
7	Sensitivity Correction	ON/OFF	ON	
8	Defect Pixel Correction	ON/OFF	ON	

Camera function block diagram

