

# QUANTUMRED

Vision, beyond the limits.



## QuantumRed VRT

For high temperature measurement

Accuracy

Expandability

Efficiency

Accurate temperature Measurement and High quality imaging

Supports various video Formats for multiple applications

Low cost, space free, comfortable, easy installation

It is possible to provide various angles of view with VGA resolution, and it can measure temperature up to 500°C. It can be used in industries that generate high temperatures due to precise chemical reactions such as secondary batteries, industries that develop petrochemicals and oil/gas, etc., and in environments where ultra-high temperatures are generated such as various power plants and semiconductor production. Temperature change of high-quality electronic/mechanical equipment can be precisely monitored under various environmental conditions, and moisture tracking, insulation material inspection, and air conditioning system inspection can be performed through non-destructive inspection on building structures.

### Key Features

- **VGA (640x480) resolution, 30Hz**
- **Temperature accuracy within  $\pm 2^{\circ}\text{C}$**
- **Precise temperature measurement up to  $\sim 500^{\circ}\text{C}$**
- **Provides various interfaces such as USB, MIPI, CameraLink, etc.**
- **Application in various fields such as industrial, chemical, battery, energy, power generation, and semiconductor**

## QuantumRed VRT Module Technical Specifications

### Imaging

Sensor Technology	Uncooled Microbolometer
Array Format	VGA(640X480)
Pixel Pitch	12 μm
Spectral Range	LWIR 8~14 μm
Thermal Sensitivity (NETD)	<40mK(Premium), <50mK(Industrial), <60mK(General)
Frame Rate	30Hz / 60Hz (EL free)
Shutter	With shutter
Accuracy	±0.3°C(with TRSM), ±2°C or ±2%
Scene Temp. Range	~ +500°C

### Mechanical

Size (mm)	38.5(W) x 38.6(H) x 34.8(D) without lens/int. Board
Weight	55g (without lens)

### Lens

FOV	59° / 8° / 12.5° / 17.4° / 22.8° / 32° / 61.1° / 75° / custom
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### Electrical

Input Voltage	5.0V
Power Consumption	1.6W (without Interface Board)
Video Channel	USB(UVC format), Camera-Link(LVDS format), MIPI(CSI-2 format), Analog, Ethernet

### Environmental

Operating Temp.	+10°C ~ 50°C
Storage Temp.	-40°C ~ +85°C

## QuantumRed Part Numbering

1		2		3		4		5		6		7		8			
Main Purpose		Resolution		Frame/Sec		Lens		HFOV		Grade		Temp. Range		Interface option			
Type	Mark	Type	Mark	Type	Mark	Type	Mark	Type	Mark	Type	Mark	Type	Mark	Type	Mark		
Temperature	QT	640*480	640A	30Hz	3	Yes	L	5.9°	059	< 40mK	P (Premium)	-20~500°C	500	USB	U		
						12.5°	125										
				60Hz	6	No	X	17.4°	174	< 50mK	I (Industrial)	N/A	000			Camera-Link	C
								22.8°	228								
								32°	320								
				61.1°	611	< 60mK	G (General)			MIPI	M						
				75°	750												
Custom	000									Analog	A						
														Ethernet	E		
														None	N		

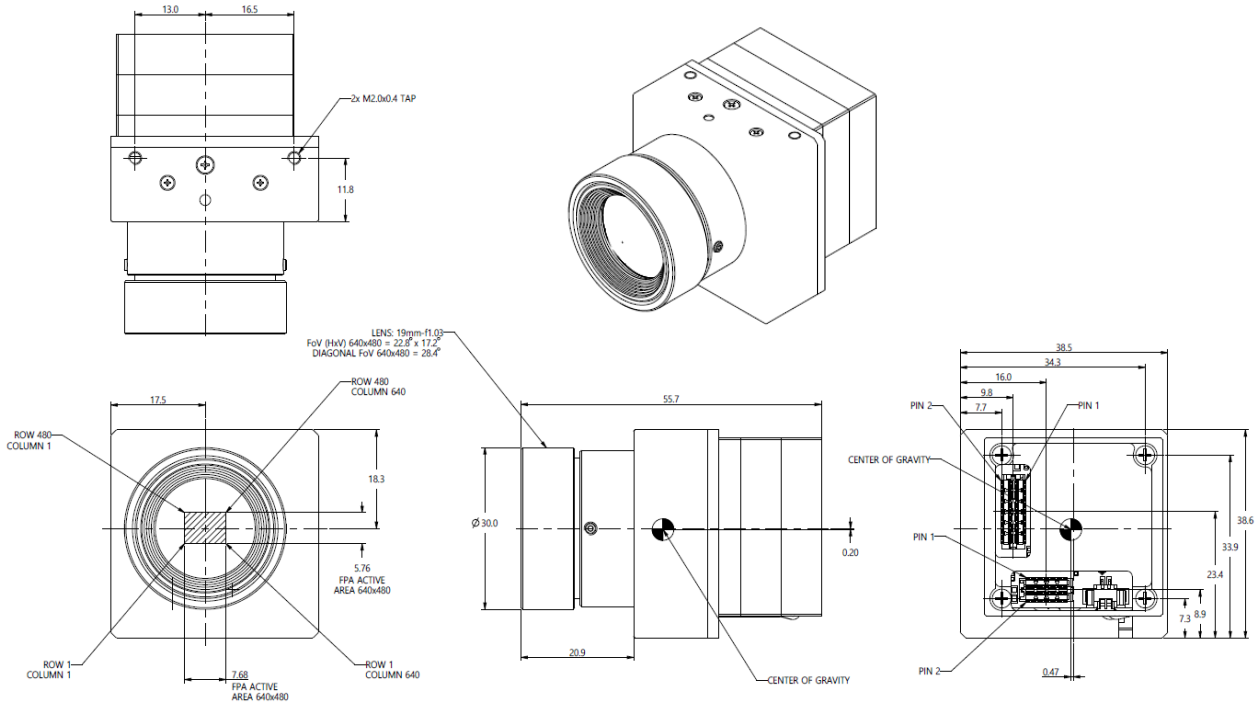
Part Numbering Sample : QT640A3L059I040U



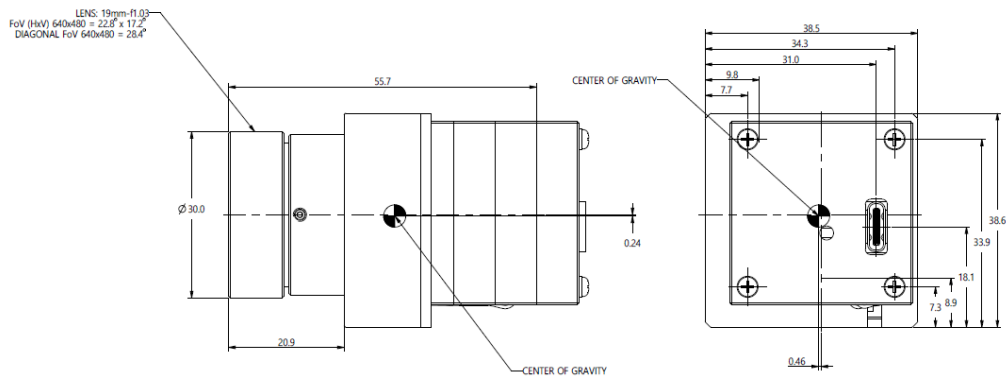
1	2	3	4	5	6	7	8
QT	640A	3	L	059	I	500	U

# QuantumRed VRT Module Dimensions

## Base Module Dimension



## USB Interface Dimension



## Camera-Link Interface Dimension

