

초소형 인체발열감지 열상엔진모듈

# QUANTUM **RED** M



한화시스템 퀀텀레드M은 근거리 인체발열감지 측정에 특화된 초소형 열상엔진모듈입니다.

## *Accuracy*

±1m, 0.3°C 이내의  
정확한 온도 측정

## *Efficiency*

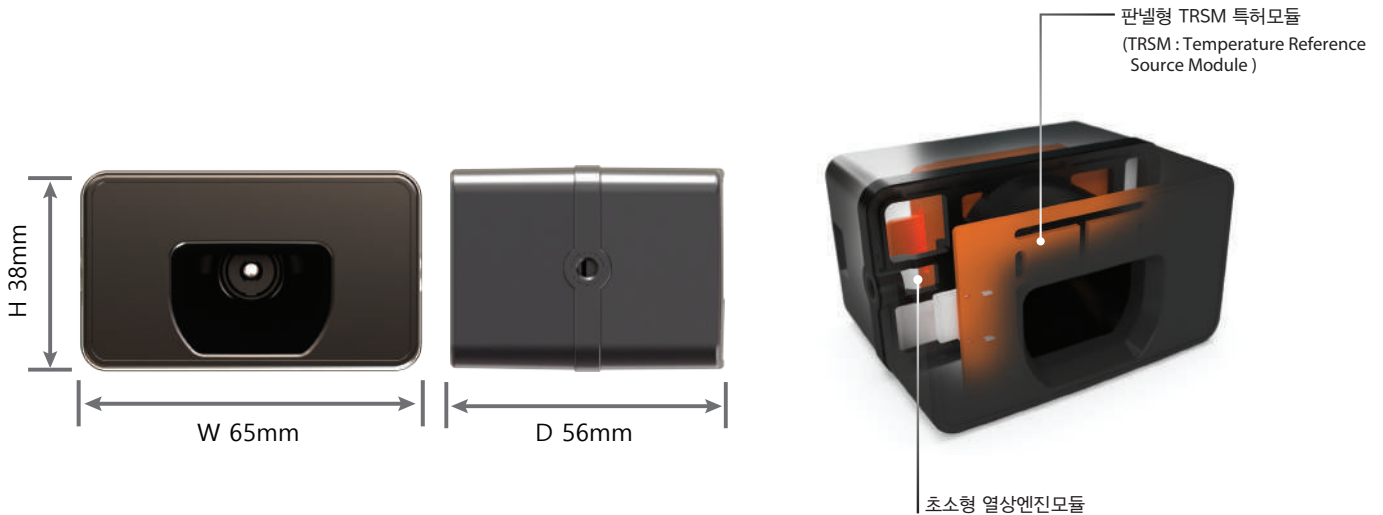
Black body (절대온도방출기)  
내장으로 초정밀 온도 레퍼런스  
기능 제공

## *Expandability*

USB 인터페이스를 통한 간편한  
Plug and Play

Vision, beyond the limits.

## Product Dimensions



## Technical Specifications

### Focal Plane Array

<b>Detector Type</b>	Uncooled Long Wavelength Infra-Red Detector / Micro - Bolometer / MEMS Device
<b>Array Size</b>	Micro-Bolometer Focal Plane Array (H80 x V60/QQQVGA)
<b>Pixel Pitch</b>	35 $\mu$ m (35um x 35um)
<b>Spectral Band</b>	Wavelength of Infra-Red, 8 ~ 14 $\mu$ m, LWIR Band
<b>Sensitivity (NETD)</b>	Minimum Resolution of Detecting Temperature Difference : 100mK @F/1.0 -30 Frames @ Room Temperature

### Video

<b>Frame Rate</b>	Video Frame Rate : ~30Hz
<b>FOV</b>	Optical Lens FOV, 50°

### Configurations - Interface

<b>Power &amp; Data Communication</b>	USB 2.0 Serial
<b>Power I/F for Built-in Temperature Reference Source</b>	USB Type-C

### Operating Condition

<b>Temperature Range</b>	10°C -30°C (Indoor Environment)
<b>Power Consumption</b>	IR Camera Module, 5V-0.15A(Normal) TRSM, 5V- Max. 0.8A @ Low operating Temperature (Adaptor 5V-2A)

### Power

<b>Input Voltage</b>	5.0V
<b>Power Dissipation (Normal)</b>	Varies by Configuration as low as 1.2W(BASE)

### Temperature Detecting Accuracy

<b>Measuring Target's Absolute Temperature</b>	Normal $\pm 0.3^{\circ}\text{C}$ @Operating Temperature Range 10°C ~ 30°C ( $\pm 0.5^{\circ}\text{C}$ @0°C~4°C)
--	---

### TRSM Temperature Variation

<b>Setting Temperature Variation of Panel-Type TRSM</b>	$\pm 0.1^{\circ}\text{C}$ @Operating Temperature Range 10°C ~ 30°C
---	--