

### Overview

- Compact Thermal Camera Module products adopted by shutter-less NUC (Nonuniformity Correction)
- Three products which cover from wide to telephoto field of view available (LW10F12-ET : this model uses telephoto type lens)
- Thanks to high performance lenses and original temperature computation format, able to measure temperature of the dedicated points. and output both temperature data and thermal image data at the same time

### Specifications

#### ■ Detector

Detector type                    Uncooled microbolometer  
Wavelength                     $8 \sim 12 \mu\text{m}$

#### ■ Image processing

Noise reduction (DNR)  
GAMMA  
Histogram average  
OFF/2D/3D (at 8bit thermal image mode)  
Adjustable(at 8bit thermal image mode)  
Auto/Manual(at 8bit thermal image mode)

#### ■ Image/Optical

Effective pixel                80 x 80 pixel  
NETD                            100mK (typical)  
Lens Focal Length            f=13mm F/1.1  
Field of view (FOV)          12° (H) x 12° (V)  
Focus                            Adjustable  
Minimum object distance    20cm

#### ■ Interface

Interface                      Interface  
Interface connector        M12 8-pin connector  
(The waterproof cable which converts from 8pin to RJ45 male is included)  
Output data                    1)16bit temperature data (UDP protocol)  
                                  2) 8bit thermal image data (UDP protocol)  
                                  3)16bit temperature + 8bit thermal image data(UDP protocol)  
                                  1)2)3): selectable

#### ■ Temperature measurement

Temperature correction     Tamron's original temperature computation format  
Thermal image temperature range     $-40^{\circ}\text{C} \sim 200^{\circ}\text{C}$   
Temperature measurement range     $10^{\circ}\text{C} \sim 100^{\circ}\text{C}$   
Temperature measurement accuracy     $10^{\circ}\text{C} \sim 60^{\circ}\text{C} : \pm 2^{\circ}\text{C}$   
    ※Ambient Temperature :  $10^{\circ}\text{C} \sim 40^{\circ}\text{C}$   
     $10^{\circ}\text{C} \sim 100^{\circ}\text{C} : \pm 5^{\circ}\text{C}$   
    ※Ambient Temperature :  $0^{\circ}\text{C} \sim 60^{\circ}\text{C}$   
    ※Not able to guarantee absolute temperature  
    Variance may occur due to the difference in measurement conditions

communication protocol  
Frame rate

Tamron original protocol  
1/2/4/8 fps

#### ■ General

Power requirement            Power over Ethernet(PoE) ,IEEE802.3 af  
Power consumption            Max 1.5W  
Performance temperature/humidity     $0^{\circ}\text{C} \sim +60^{\circ}\text{C} / 20 \sim 80\%$  (no condensation)  
Operating temperature/humidity     $-20^{\circ}\text{C} \sim +70^{\circ}\text{C} / 20 \sim 80\%$  (no condensation)  
Storage temperature         $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$   
Dimensions (W x H x D)    46 x 46 x 71mm  
Weight                        Approx 228g  
Dust/Water proof            equivalent to IP67 level

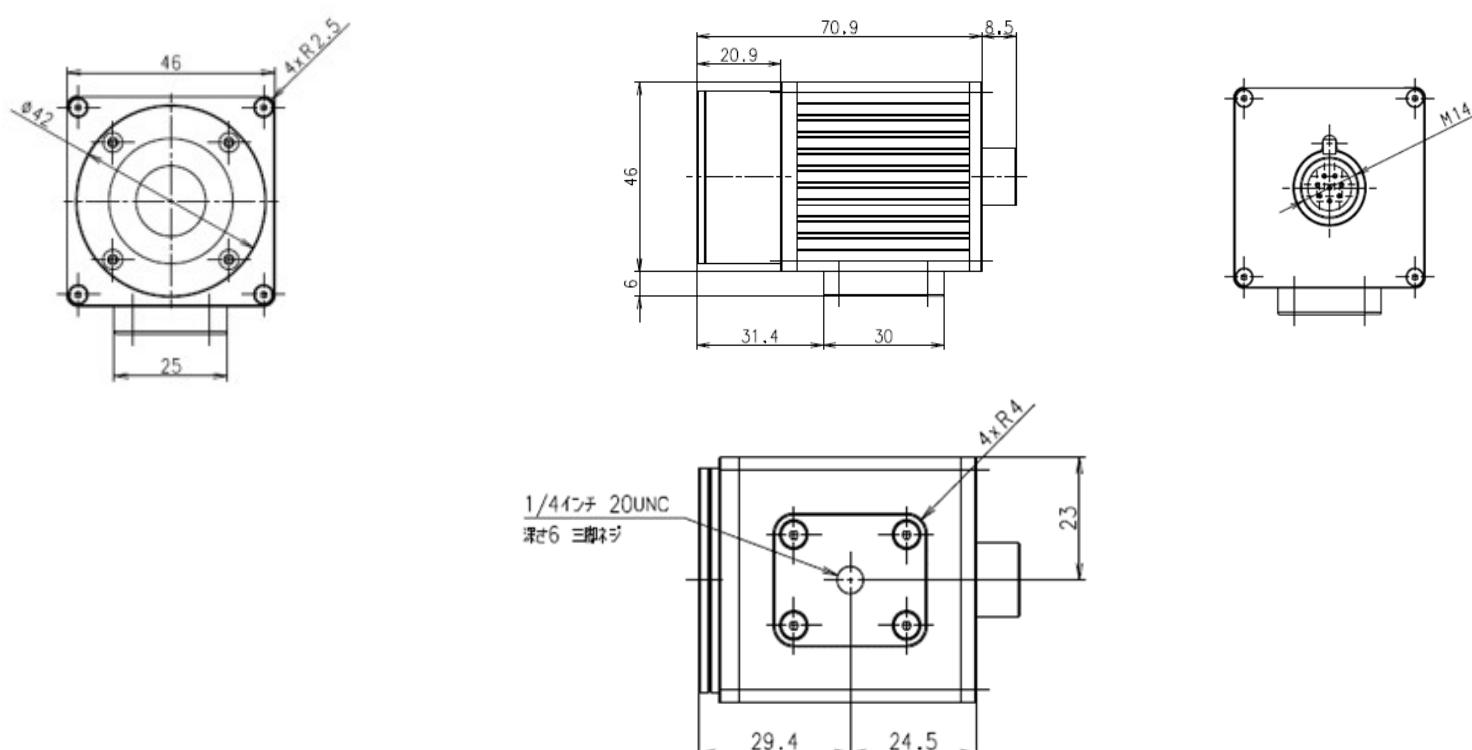
#### ■ Temperature analysis function

Temperature analysis area    6400 pixel  
(always measures temperature each pixel)

※Specifications and design subject to change without notice

### Dimensions

unit:mm



Model name	Tamron co.Ltd	Category	Issue	page
LW10F12-ET		LW IR Thermal camera module	2020/8	1/1