



### Product Features

- High resolution, 1/2" format CCD  
TM-200: 768 H x 494 V (EIA)  
TM-300: 752 H x 582 V (CCIR)
- Super mini size
- Advanced micro lens interline transfer CCD
- Shutter from 1/60 to 1/10,000 sec.
- Externally adjustable manual gain, AGC, shutter, gamma, and field/frame select
- External sync
- Custom cable length optional
- Input voltage 11-15V DC, 2.5W

### General Description

The TM-200/TM-300 camera offers high performance in a very tiny package, at a very affordable price. Designed to meet a variety of rugged industrial application requirements, this camera has many standard and optional features. It is available in both EIA (TM-200) and CCIR (TM-300) formats.

The most commonly needed adjustments, manual gain, gamma, AGC, and field/frame selection, are easily accessible on the rear camera panel. Electronic shuttering is another standard feature. Eight shutter speeds, ranging from 1/60 sec. to 1/10,000 sec., can be selected externally using the rotary switch on the rear panel.

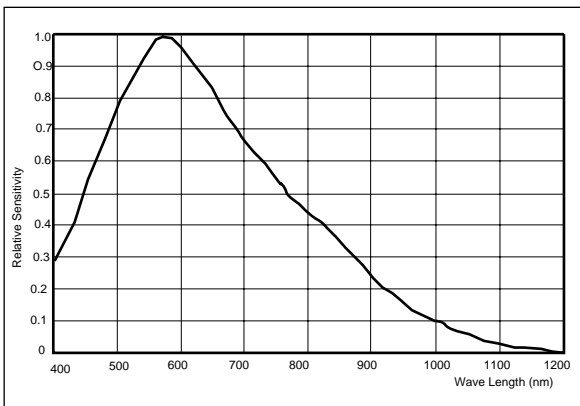
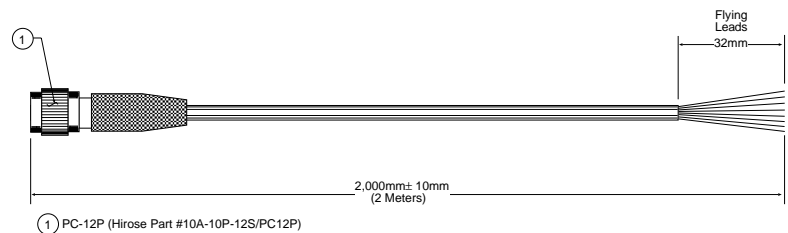
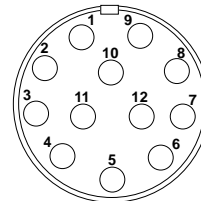
The miniature size of the TM-200/TM-300 camera eliminates the need for a remoted imager in all but the most confined spaces. These cameras fit easily, both physically and functionally, into all types of machine vision, automated inspection, and related applications. Other uses include remotely piloted vehicles, miniature inspection devices, surveillance, microscopes and medical equipment.

### Connectors and Cables

#### 12P-02 Interface Cable (optional)

Pin#	Lead Color	Function
1	Gray	GND
2	Yellow	+12VDC
3	Red coax shield	GND
4	Red coax	Video
5	Orange coax shield	GND
6	Orange coax	N/C
7	Black coax	VD Input
8	White coax shield	GND
9	White coax	HD Input
10	Brown	N/C
11	Blue	Integration
12	Black coax shield	N/C

#### 12-Pin Connector on Rear Panel

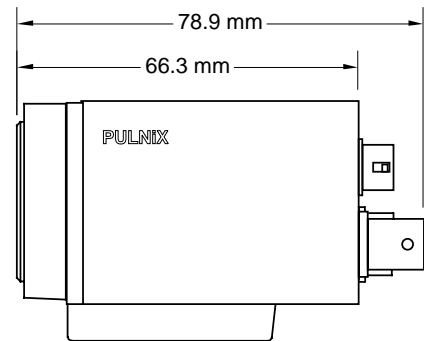
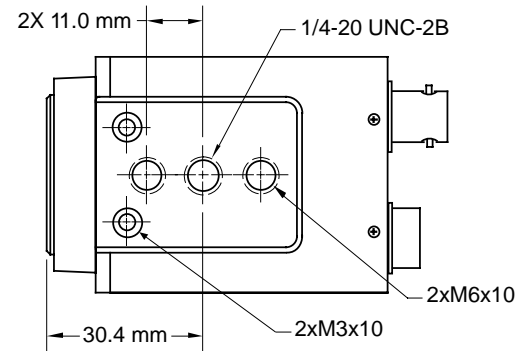


TM-200/300 Spectral Response

# Specifications

Model	TM-200 (EIA)	TM-300 (CCIR)
Imager	1/2" Interline transfer CCD	
Pixel	768 (H) x 494 (V)	752 (H) x 582 (V)
Cell size	8.4 μm x 9.8 μm	8.6μm x 8.3μm
Scanning	525 lines EIA	625 lines CCIR
Sync	Internal/External auto switch	
TV resolution	fH=15.734KHz ±5% fV=59.94Hz ±5%	fH=15.725KHz±5% fV=50Hz±5%
S/N ratio	570 (H) x 350 (V)	
Min. illumination	50dB min., 56dB typical	
Video output	0.5 lux (F=1.4)	
AGC	1.0 Vp-p composite video, 75Ω	
Gamma	ON/OFF back panel switch	
Lens mount	1 or 0.45 back panel switch	
Power req.	C-mount, back focus adjustable	
Operating temp.	190 mA, 11-15V DC	
Vibration & shock	-10° C to +50° C	
Size (W X H X L)	Vibration 7G (20-2000 Hz), Shock 70G	
Weight	45.8mm x 39.4mm x 66.3mm	
Power cable	1.81" x 1.54" x 2.60"	
Power supply	157g (5.6 oz.)	
Functional options	12P-02 (optional)	
Accessories	PD-12, K25-12V, DC-12N P-15-12	
	3-1, 3-2, 7-2, 21, 25	
	See current price list	

# Dimensions (mm)



# Shutter Speeds

## Manual Shutter Control

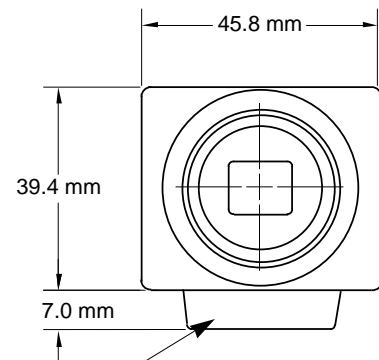
Mode	Shutter Speed	
0	1/60	No Shutter
1	1/125	131H
2	1/250	63H
3	1/500	31H
4	1/1,000	16H
5	1/2,000	8H
6	1/4,000	4H
7	1/10,000	1.5H
8	N/C	
9	N/C	

### Note:

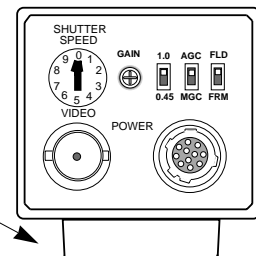
Mode 0 = Normal Mode; Mode 1-4 = Fast mode;  
Mode 5-7 = Slow Mode; Mode 8 is same as Mode 0;  
Mode 9 is same as Mode 1.

One (1) H = 63.5μsec. (TM-200 only)

**Note:** Use correct size adjustment tools when changing shutter speed and gain setting to avoid damaging adjustment devices.



Camera mounting pad also can be positioned on the top or bottom of the camera.



Rear Panel

TM-200/TM-300

## Product made in the USA

**In Japan**  
Takenaka System Co. Ltd.  
2-1, Shinomiya Narano Cho  
Yamashina-ku, Kyoto, 607-8032  
Tel: 075-593-9787  
Fax: 075-593-9790

**In Australia**  
PULNIX America Inc.  
Unit 16, #35 Garden Road  
Clayton, Vic 3168  
Tel: 3-9546-0222  
Fax: 3-9562-4892

**In the U.K.**  
PULNIX Europe Ltd.  
Aviary Court, Wade Road  
Basingstoke, Hants RG24 8PE  
Tel: 01256-475555  
Fax: 01256-466268

**In Germany**  
PULNIX Europe Ltd.  
Steinbruch 5  
63755 Alzenau  
Tel: 06023-9625-0  
Fax: 06023-4667

ISO-9001  
Cert. #A3942 RVC



## Industrial Products Division

PULNIX America Inc. Tel: 408-747-0300  
1330 Orleans Drive Tel: 800-445-5444  
Sunnyvale, CA 94089 Fax: 408-747-0660  
Email: [imaging@pulnix.com](mailto:imaging@pulnix.com)  
[www.pulnix.com](http://www.pulnix.com)