



# MODEL SI-M336 SI-M358 SI-M359

COLOR CCD CAMERA



These remote head monochrome cameras with varying cable lengths utilize an advanced sensor to capture high-resolution images.

## FEATURES

- High resolution monochrome 1/2" Hyper HAD IT CCD sensor
- EIA: 768 (h) x 494 (v) pixels  
CCIR: 752 (h) x 582 (v) pixels.
- Remote head  $\varnothing$ 17mm 2m, 5m or 10m cable lengths, detachable head
- Improved dynamic range and smear performance
- Extreme sensitivity. High S/N ratio >56 dB
- Interlaced or non-interlaced scanning
- Field or frame integration mode
- Electronic shutter or asynchronous trigger shutter
- Continuous variable shutter in trigger mode 2
- Long time integration with external VD pulses
- Extensive range of customized trigger modes for OEM applications
- HD/VD synchronization input or output - 75 Ohm or TTL level
- Exposure Enable (EEN) and Write Enable (WEN) output
- Frame grabber friendly interface

*Our people make a difference.*

# Choice. Value. Service.

# MODEL SI-M336, 358, 359

## Specifications for SI-M336/M358/M359

### Specifications

SI-M336/M358/M359C

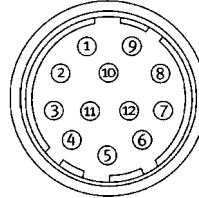
SI-M336/M358/M359E

TV Standard	EIA	CCIR
CCD sensor	1/2" Hyper HAD Interline transfer CCD	
Effective no. of pixel	EIA: 768(H) x 494(V) 380,000 approx.	CCIR: 752(H) x 582) 440,000 approx.
Scanning area	6.45mm (H) x 4.84mm(V)	
Scanning system	EIA: 2:1 Interface Non-interlace (1/60 sec.)	CCIR: 2:1 Interface Non-interlace (1/50 sec.)
Scanning freq.	EIA H: 15.734KHz V 59.94Hz	CCIR H: 15.625KHz V 50Hz
Sync. system	1. Ext. HD/VD Input: 4.0Vp-p ±2.0V at 75Ω terminated (For TTL input 2.0V - 5.0V, set SW2 at OFF position) 2. Ext. trigger input: 4.0V ±2.0Vp-p non-terminated 3. Int. HD/VD output: 4.0Vp-p at 75Ω non-terminated 4. Pixel Clock output (User option): 4.0V	
Resolution	H: 570 TV lines, V:480 TV lines (at frame accumulation mode)	H: 570 TV lines, V:480 TV lines (at frame accumulation mode)
S/N ratio	56dB or more (AGC off, Gamma = 1.0), 100KHz - 4.2MHz	
Sensitivity	500lux (FB, AGC off)	
Min. illumination on CCD sensor	0.05lux (F1.4, AGC on, Video level - 5dB)	
Normal Shutter	Off, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.	
High Speed Shutter	1/20,000, 1/40,000, 1/60,000, 1/80,000, 1/100,000, 1/200,000, 1/400,000, 1/800,000 sec	
Ext. Trigger Shutter	Mode-1	1/60 - 1/800,000 sec.
	Mode-2	1/77 - 1/10,000 sec.
	Mode-3*	2 - 1/10,000 sec.
	Long Term Exposure	2 FLD - 120 FLD
Video Output	VS 1.0Vp-p at 75Ω terminated	
Gamma Correction	1.0 or 0.45	
Gain	Manual (GAIN VR: 0 - +15db) or AGC	
Operating temperature	-5°C to +45°C	
Humidity	20 - 80% non-condensing	
Power	12V DC ±10%, 3.6W (M336), 3.3W (M358/M359)	
Dimensions (control unit)	40 x 50 x 80 mm (HxWxD)	
Weight (control unit)	210g	
Dimensions (camera head)	ø17 x 60 mm (M336)	
Dimensions (camera head)	ø17 x 95 mm (M358/M359)	
Weight (camera head)	10 g (M336), 15 g (M358/M359)	
Lens Mount	M15.5 x 0.5	

\* ) HD sync. VD sync. / (Trigger) input or output by internal straps. Inputs TTL or 75 Ohm terminated by internal straps.

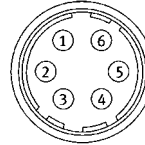
### Connection Description

#### DC-IN/SYNC.



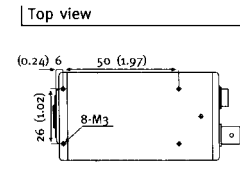
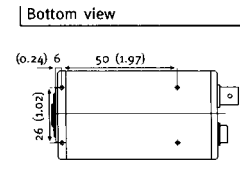
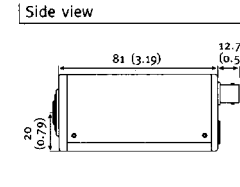
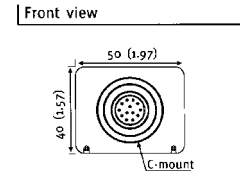
- Pin 1 Ground  
2 +12V DC  
3 Ground  
4 Video output  
5 Ground  
6 HD in/HD out  
7 VD in/VD out  
8 Ground  
9 N.C. Y/Pixel clock out  
10 Ground  
11 +12V DC  
12 Ground

#### TRIGGER

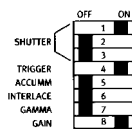


- Pin 1 N.C.  
2 EEN output  
3 Ground  
4 N.C.  
5 Trig. input  
6 WEN pulse output

### Dimensions

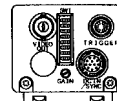


### Switch Setting



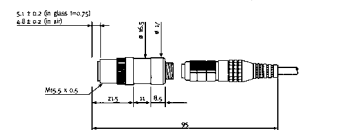
SW1-1 ED2	SW1-2 ED1	SW1-3 ED0	Shutter speed (sec.)		Shutter speed (sec.)	
			Elect. Shutter	Ext. trigger shutter	Elect. Shutter	Ext. trigger shutter
OFF	OFF	OFF	OFF	1/60	1/20,000	
OFF	OFF	OFF	ON	1/125	1/40,000	
OFF	ON	OFF	OFF	1/250	1/60,000	
OFF	ON	ON	OFF	1/500	1/80,000	
ON	OFF	OFF	OFF	1/1000	1/100,000	
ON	OFF	ON	OFF	1/2000	1/200,000	
ON	ON	OFF	OFF	1/4500	1/400,000	
ON	ON	ON	OFF	1/10,000	1/800,000	

Normal Speed                      High Speed



### Camera Head Dimensions

#### SI-M336/M358/M359



### Ordering Information

SI-M336 1/2" Monochrome Remote Head Camera CCIR/EIA 2 m Cable  
SI-M358 1/2" Monochrome Remote Head Camera CCIR/EIA 5 m Cable  
SI-M359 1/2" Monochrome Remote Head Camera CCIR/EIA 10 m Cable  
OP 735 Special Lens 7.5 mm

Design and specifications subject to change without notice.

Conversion: 1" = 25.4mm  
Measurement conversions are approximate



Distributed by

**VOLTRIUM SYSTEMS PTE LTD**  
57 Ubi Avenue 1 #04-14 Ubi Centre  
Singapore 408936  
Tel: +65-6844 2330  
Fax: +65-6844 2331  
email: voltrium@voltrium.com.sg  
Website: http://www.voltrium.com.sg