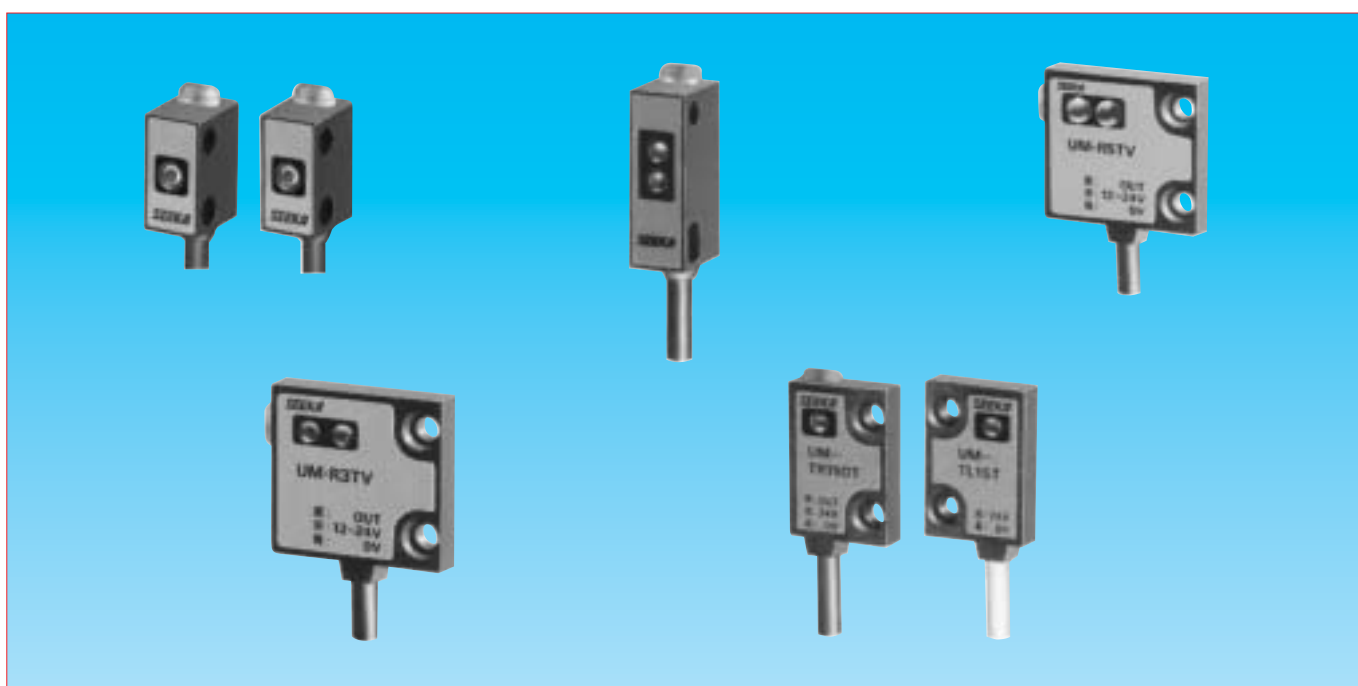


# UM series

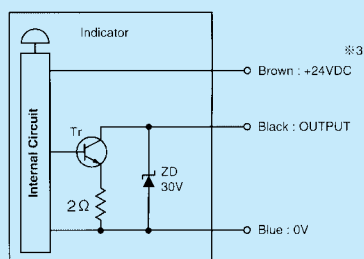
DC POWER SUPPLY  
PHOTO SENSORS

- Ultra small size( extremely thin and narrow )
- Suitable for installation in a limited space or for building into a compact device
- Amplifier built-in type is extremely thin ( thickness is just 3.5mm ! )  
Capacity .....0.8cm<sup>3</sup> max.  
Capacity ratio .....Approx. 1/5 ( Ratio by our company )
- Low cost
- The visible light source is a red LED, easy to check transmitter output.
- A stability indicator and an operation indicator are fitted.
- Wide range of uses, from small scaled to total FA ( factory automation )

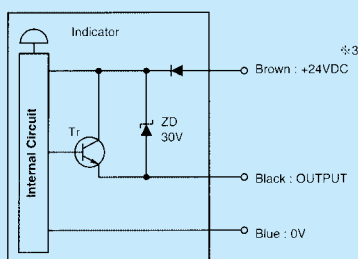


## OUTPUT CIRCUIT ( Throughbeam type reseiver )

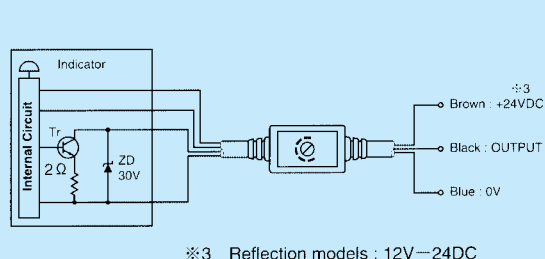
### NPN output type



### PNP output type



### NPN output with sensitivity Vr.



## SPECIFICATIONS

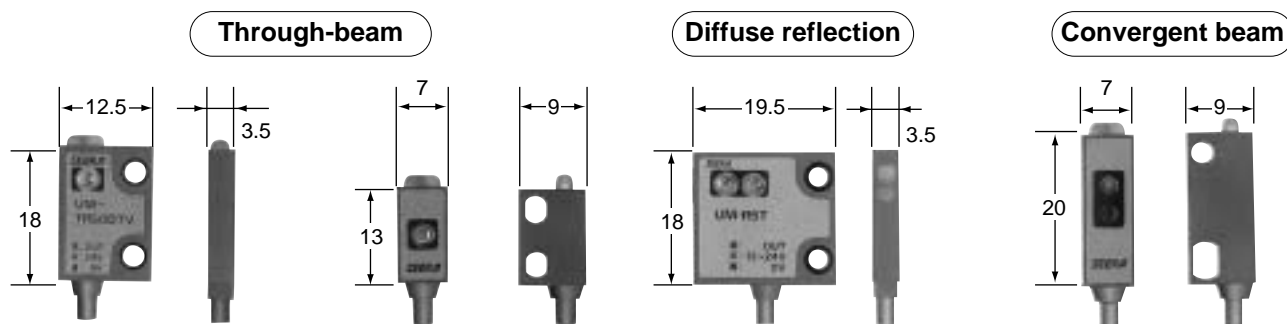
Models	NPN type	UM-T15DT	UM-T15DTV	UM-T50DT	UM-T50DTV	UM-T50DS	UM-R3T	UM-R3TV	UM-R5T	UM-R5TV	UM-Z3SV	
	PNP type	UM-T15DTP	UM-T15DTVP	UM-T50DTP	UM-T50DTVP	UM-T50DSP	UM-R3TP	UM-R3TVP	UM-R5TP	UM-R5TVP	UM-Z3SVP	
Detection		Through beam						Diffuse reflection				Convergent beam
Range( Max. )		15cm		50cm			0.2 to 3cm 1		0.2 to 5cm 1		0.5 to 3cm 1	
Object Resolution		3mm( Min. ) Opaque object						-				
Power supply		24V DC $\pm$ 10%, Ripple 10%( Max. ) 2						12V - 24V DC $\pm$ 10%, Ripple 10%( Max. )				
Current consumption	NPN type ( Max. )	Tr. : 15mA Rc. : 15mA	Tr. : 15mA Rc. : 22mA	Tr. : 15mA Rc. : 15mA	Tr. : 15mA Rc. : 22mA	Tr. : 15mA Rc. : 15mA	20mA	27mA	20mA	27mA	27mA	
	PNP type ( Max. )	Tr. : 15mA Rc. : 17mA	Tr. : 15mA Rc. : 24mA	Tr. : 15mA Rc. : 17mA	Tr. : 15mA Rc. : 24mA	Tr. : 15mA Rc. : 17mA	22mA	29mA	22mA	29mA	29mA	
Output mode	NPN type	NPN Open collector Rating: Sink current 80mA( DC30V ) Max.										
	PNP type	PNP Open collector Rating: Source current 80mA( DC30V ) Max.										
Operating mode		Dark-ON						Light-ON				
Response time		0.5msec( Max. )										
Hysteresis		-						10%( Max. )				
Light source		Red LED Wave length( 660nm )										
LED Indicator		Operation.....Red LED Stability.....Green LED										
Sensitivity adjus( Vr. )		-	Vr.	-	Vr.	-	-	Vr.	-	Vr.	Vr.	
Connection		Trns. : 0.1sq $\times$ 2C 2m Gray Rcvr. : 0.1sq $\times$ 3C 2m Black						0.1sq $\times$ 3C 2m Black				
Weight ( Max. )	Trns.	30g						30g	40g	30g	40g	40g
	Rcvr.	30g	40g	30g	40g	30g						

- 1 5  $\times$  5cm White paper  
2 12V DC type is available.

## ENVIRONMENT

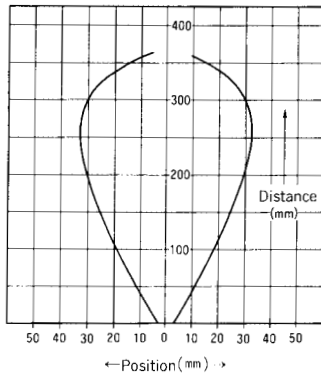
Ambient light	3,000Lux( Max. )
Operating temp.	- 25 ~ + 55
Humidity	35 ~ 85%RH
Case protection	IP64
Vibration	10 ~ 55Hz, 1.5mm Amplitude 2 Hr., 3 Directions

## Actual Size

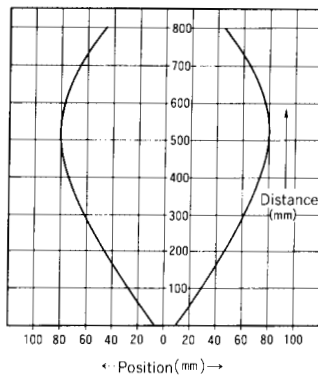


## ACTIVE BEAM WIDTH

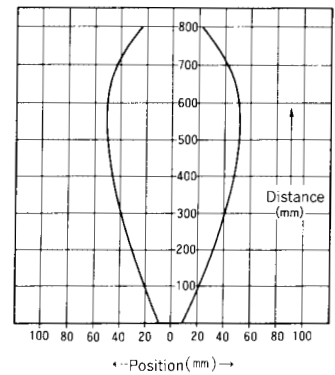
UM-T15DT • UM-T15DTV



UM-T50DT • UM-T50DTV

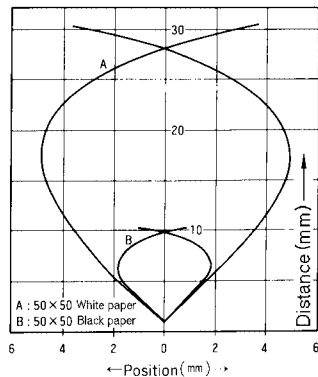


UM-T50DS

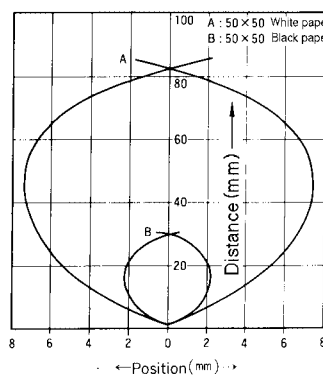


## OPERATING AREA CHARACTERISTICS

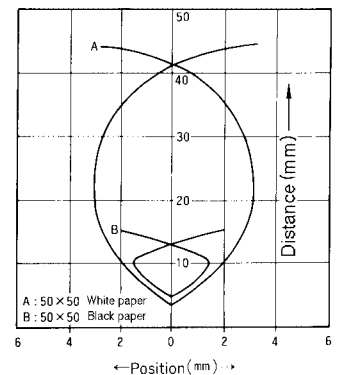
UM-R3T • UM-R3TV



UM-R5T • UM-R5TV

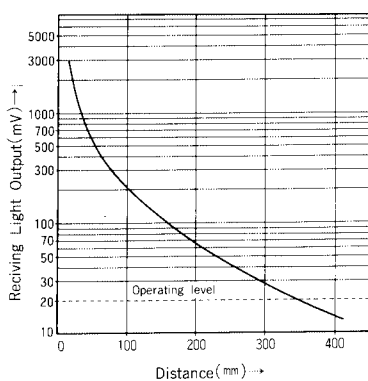


UM-Z3SV

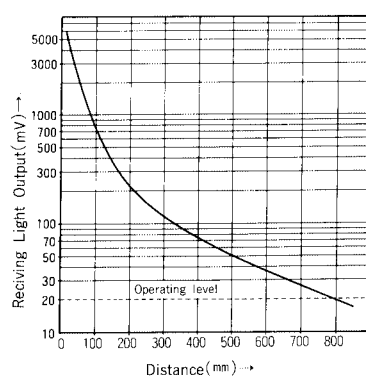


## SENSING DISTANCE VS. OUTPUT CHARACTERISTICS

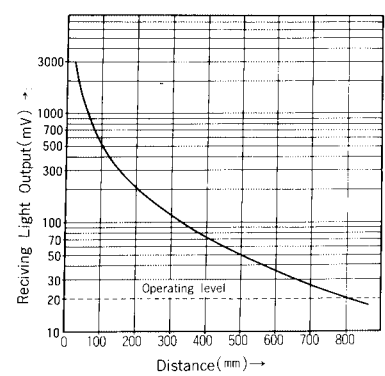
UM-T15DT • UM-T15DTV



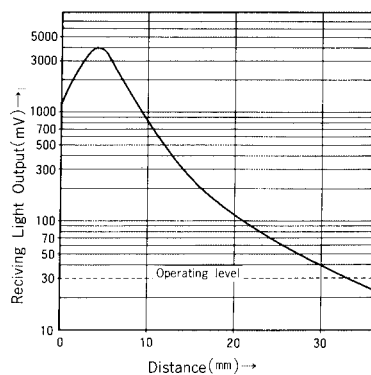
UM-T50DT • UM-T50DTV



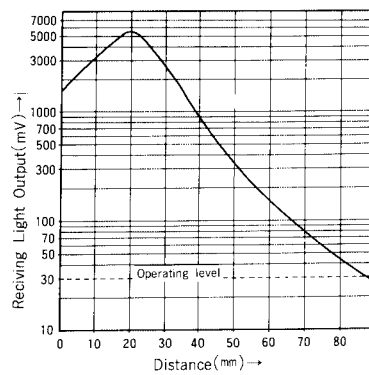
UM-T50DS



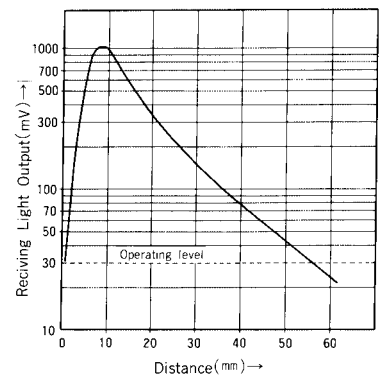
UM-R3T • UM-R3TV



UM-R5T • UM-R5TV

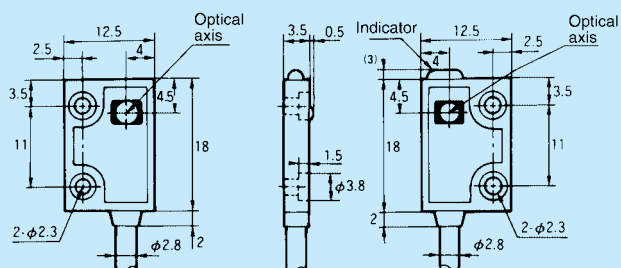


UM-Z3SV



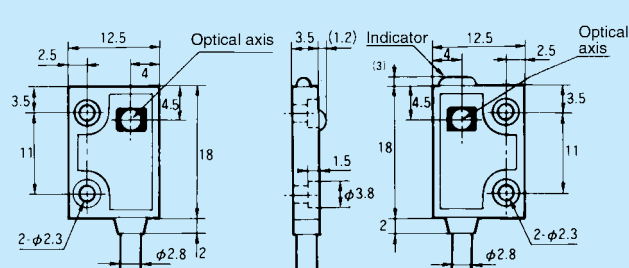
## DIMENSIONS

### UM-T15DT UM-T15DTV ( 1 )



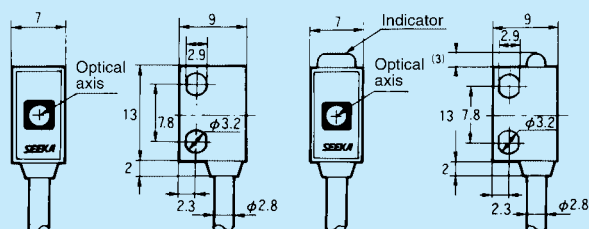
(Edge drawing is omitted, but the edge view is the same except there is no indicator on the transmitter)

### UM-T50DT UM-T50DTV ( 1 )

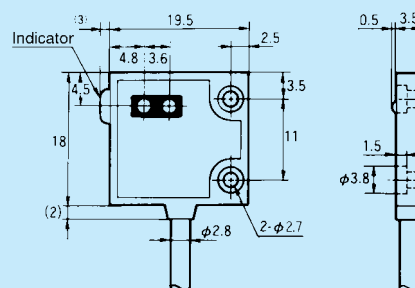


(Edge drawing is omitted, but the edge view is the same except there is no indicator on the transmitter)

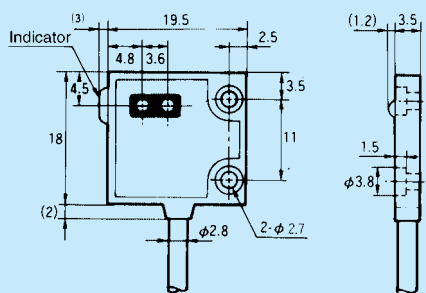
### UM-T50DS



### UM-R3T UM-R3TV ( 1 )

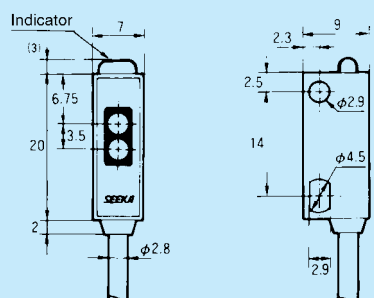


### UM-R5T UM-R5TV ( 1 )

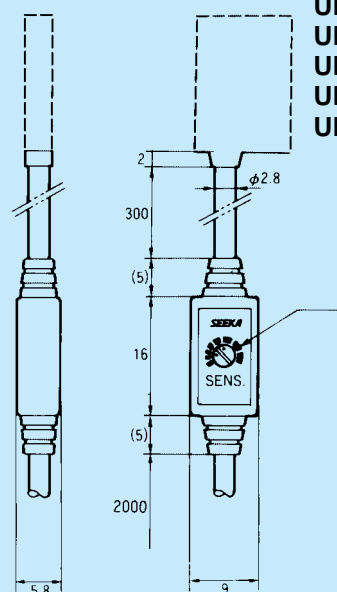


1 The models with a "V" at the end of the model numbers have a sensitivity adjustment. The through beam type has it on its receiver.

### UM-Z3SV ( 1 )



UM-T15DTV  
UM-T50DTV  
UM-R3TV  
UM-R5TV  
UM-Z3SV



During installation, fasten directly with a screw. Tightening torque should be less than 0.3N.m (3kgf·cm). There is an optional mounting bracket.