



Vision Datum

Machine Vision LED Illumination

Machine Vision
LED Bar illumination

ABOUT US

Vision Datum as leading manufacturer of machine vision products in China, have almost 20 years in this industry, and the major products cover machine vision lighting / illumination, camera, lens, machine vision algorithms and storage software.

With abundant experience in industry application and scientific research, Vision Datum Machine Vision Led Illumination offer a wide range of selections, and we provide OEM / ODM customization for various lighting solutions, including but not limited to Line Scan Lights, Telecentric Lights, Ultraviolet and Infrared Lights , Waterproof and Anti-corrosion Lighs, and Multi-spectral Lights.

Vision Datum products have been exported to almost 100 countries and regions, and in thousands of projects we have received countless affirmations and reputations. Vision Datum machine vision products are well-known as innovative, flexible, stable and easy to use, enabling reliable inspection in many applications.



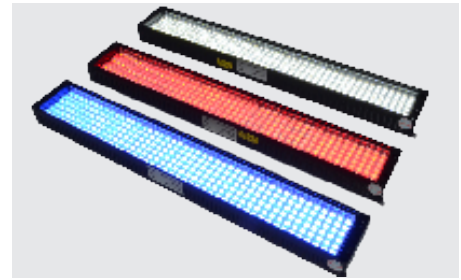
Bar Illumination HL Series

Features

- Standard mold and stitching installation ensured structure stability.
- Special optical lenses equipped to concentrate the ray.
- In addition to available models, the bar lights with various sizes or colours can be customized easily according to request.

Applications

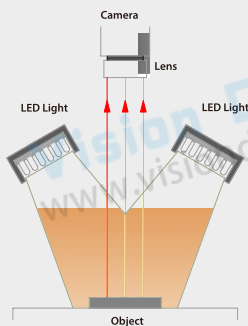
- IC marking inspection, inspection of components on glass substrates
- Dirt inspection on cap sides and inside surfaces
- Wafer appearance inspection
- Solder inspection and connector pitch inspection
- Inspection, etc. of BGA, QFP, etc.



Detail Drawing



Illumination Structure

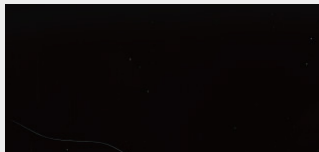


Examples of Bar Light Images

Lights: HL7426W

Inspect PCB printing characters.

Can check the object whose surface is smooth and glossy. Meet the needs overcome the reflective surface and highlight the surface details. The bar lights to illuminate from side can solve the light reflecting problem.



Lights: HL-8015B

Inspect bar code on cigarette box.

The surface is very smooth and reflect light. Needs to overcome the reflective surface and highlight the details. Choose this bar light to illuminate object from side can solve can Light-reflecting.



Common Specifications

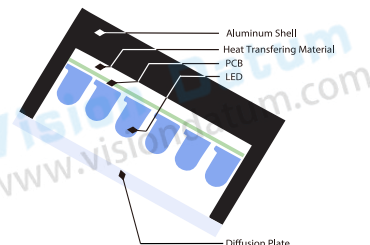
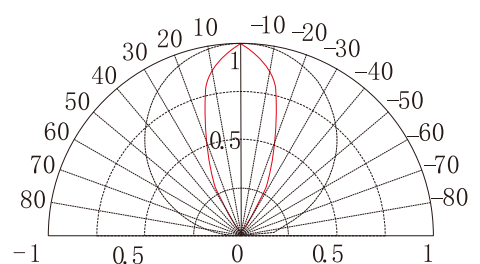
Input voltage	24 VDC
Connector	SMR-03V-B
Wavelength range	Red: 620-630nm; Blue: 465-475nm; Green: 515-530nm; White: 6000-10000K(ColorTemperature)
Cable length	500 mm
Optional Accessory	Diffusion plate, Polarizing plate. DC extension cable: 1m/2m/3m
Operating environment (indoor)	Temperature: 0~40°C Humidity: 20% to 85% RH (with no condensation)
Life time	White: 30,000hrs, Red: 60,000hrs (Depends on the operating environment, not a guarantee)
Case material	Aluminum alloy, Resin

Optional Accessory: Diffusion Plate

To be mounted in front of the LED lighting. Used to soften the lighting output, so as to reduce the glares on specular surface.



Illuminated Angle Diagram

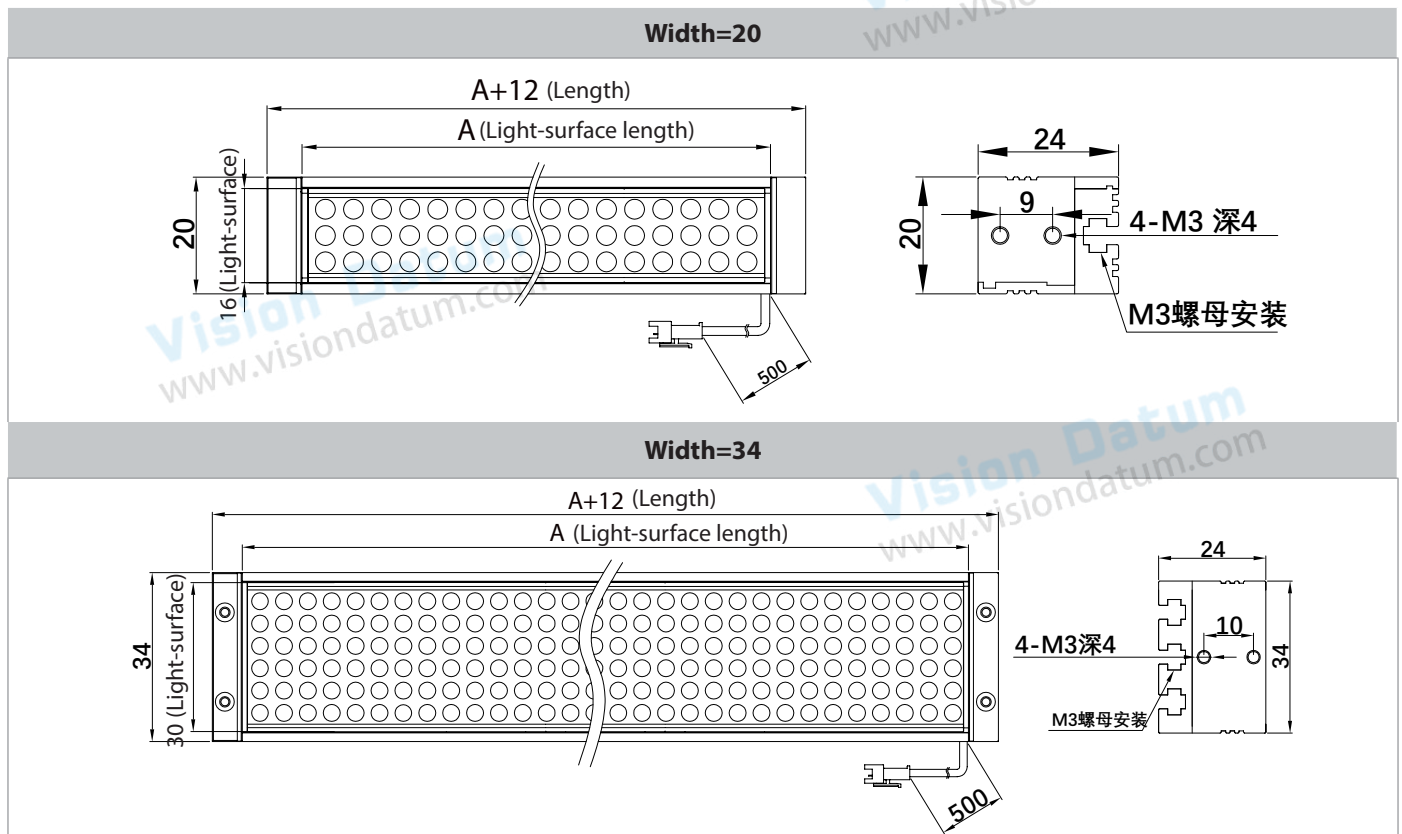


Explanation of Model Code HL Series

VT-LT2-HL	119	16	(W/B/G/R)
Series	Emitting Length	Emitting Width	Color

Model No.	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)				Dimensions		
	Light Area		Number of lamp beads	Supply Voltage (v)	Power cons. (w) ●	Power cons. (w) ● ●	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)							
VT-LT2-HL4016	40	16	3	24	1.3	1.7	52	20	24
VT-LT2-HL8016	80	16	3	24	2.7	6.9	92	20	24
VT-LT2-HL11916	120	16	3	24	3.5	4.5	132	20	24
VT-LT2-HL15816	160	16	3	24	5.5	7.0	172	20	24
VT-LT2-HL19716	197	16	3	24	6.0	7.5	209	20	24
VT-LT2-HL7430	74	30	6	24	6.6	12.1	86	34	24
VT-LT2-HL8630	86	30	6	24	2.6	4.4	98	34	24
VT-LT2-HL9830	98	30	6	24	3.0	5.0	110	34	24
VT-LT2-HL14630	146	30	6	24	3.5	5.8	158	34	24
VT-LT3-HL15030	150	30	6	24	5.2	8.7	162	34	24
VT-LT2-HL17030	170	30	6	24	6.1	10.2	182	34	24
VT-LT2-HL18030	180	30	6	24	6.8	11.5	192	34	24
VT-LT2-HL19430	194	30	6	24	7.0	12.1	206	34	24
VT-LT2-HL21830	218	30	6	24	7.8	13.7	230	34	24
VT-LT2-HL26630	266	30	6	24	9.6	16.7	278	34	24
VT-LT2-HL29030	290	30	6	24	10.5	18.2	302	34	24
VT-LT2-HL38630	386	30	6	24	14.6	25.3	398	34	24
VT-LT2-HL43430	434	30	6	24	16.4	28.5	446	34	24
VT-LT2-HL57830	578	30	6	24	21.9	38.0	590	34	24

Dimension



High brightness Bar Illumination HL + Series

Features

- With high power LEDs, the light intensity is times higher than standard one.
- Aluminum housings ensure an optimal heat dissipation and dispose of various practical mounting possibilities.

Major Applications

- Robot operation directive.
- Long distance illumination.
- Inspection of sealant padding in auto industry and large format printing material, etc..



Sample Images



Imaging for characters Bar code reading



Imaging for characters Keystroke character check



Imaging for characters Checking the appearance quality

Model No.	Optical spec.		Electrical specifications		Dimensions		
	Light Area		Supply Voltage (v)	Power cons. (w) ○	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)					
VT-LT3-HL+10035W	100	35	24	17.0	116	45	50
VT-LT3-HL+20035 W	200	35	24	34.0	216	45	50
VT-LT3-HL+30035 W	300	35	24	51.0	316	45	50
VT-LT3-HL+40035 W	400	35	24	68.0	416	45	50
VT-LT3-HL+50035 W	500	35	24	85.0	557.5	45	75.4
VT-LT3-HL+60035 W	600	35	24	102.0	657.5	45	75.4
VT-LT3-HL+70035 W	700	35	24	119.0	757.5	45	75.4
VT-LT3-HL+80035W	800	35	24	136.0	857.5	45	75.4
VT-LT3-HL+90035 W	900	35	24	153.0	957.5	45	75.4
VT-LT3-HL+100035 W	1000	35	24	170.0	1057.5	45	75.4
VT-LT3-HL+10022 W	100	22	24	8.5	112	28	44
VT-LT3-HL+20022 W	200	22	24	17.0	212	28	44
VT-LT3-HL+30022 W	300	22	24	25.5	312	28	44
VT-LT3-HL+40022 W	400	22	24	34.0	412	28	44
VT-LT3-HL+50022 W	500	22	24	42.5	512	28	44
VT-LT3-HL+60022 W	600	22	24	51.0	612	28	44
VT-LT3-HL+70022 W	700	22	24	59.5	712	28	44
VT-LT3-HL+80022 W	800	22	24	68.0	812	28	44
VT-LT3-HL+90022 W	900	22	24	76.5	912	28	44
VT-LT3-HL+100022 W	1000	22	24	85.0	1012	28	44

Model No.	Optical spec.		Electrical specifications		Dimensions		
	Length (mm)	Width (mm)	Supply Voltage (v)	Power cons. (w)	Length (mm)	Width (mm)	Height (mm)
VT-LT3-HL+11065W	110	65	24	14.4	118	71	34
VT-LT3-HL+17020W	170	20	24	-	178	26	34
VT-LT3-HL+20065W	200	65	24	68	220	85	60
VT-LT3-HL+100065W	1000	65	24	324	1020	85	60

Dimension (mm)

<p>VT-LT3-HL+11065</p>	<p>VT-LT3-HL+17020</p>	<p>VT-LT3-HL+20065</p>
<p>VT-LT3-HL+100065</p>	<p>VT-LT3-HL+ 10035-40035</p> <p>L-35 (L ≤ 400mm)</p>	
<p>VT-LT3-HL+ 50035-100035</p> <p>L-35 (500 ≤ L ≤ 1000mm)</p>	<p>VT-LT3-HL+ 10022-100022</p> <p>L-22 (100 ≤ L ≤ 1000mm) L ≤ 800 is analog plug, L ≥ 900 is aviation plug</p>	

Square Bar type Illumination HLMD Series

Features

- Four high-intensity bar LED arrangement
- Optimal direct bright field or oblique dark field lighting from adjustable angles
- Can be controlled independently

Applications

- OCR on IC chips.
- Location of MARK point.
- Various inspections of large area flat material.



Illumination Structure

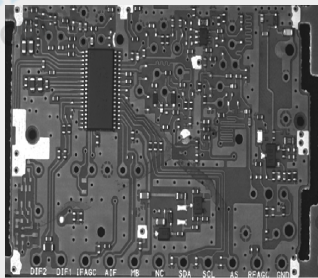


Sample Images



Lights: HLMD-8080W-MS

Use the HLMD Lights to illuminated the keyboard Illuminating from a specific angle, can find out missing & incline characters, and other defects.



Lights: HLMD-7474R-MS

Illuminated in a low angle on PCB board surface can check whether all components present.



Lights: HLMD-4444 W-MS

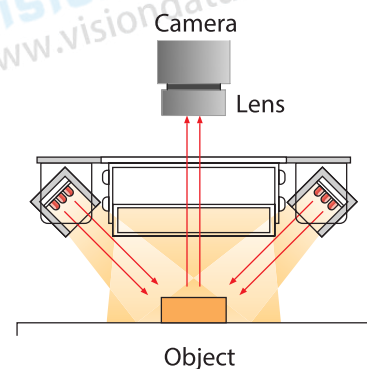
Freely adjust each lights' angle, make the product's surface evenly illuminated and surface character clearly showed/ demonstrated. Can inspect different defects on the mobile's surface.

Common Specifications

Input voltage	24 VDC
Connector	SMR-03V-B
Wavelength range	Red: 620-630nm; Blue: 465-475nm; Green: 515-530nm;
Color temperature (white)	6000-7500K
Operating environment (indoor)	Temperature: 0~40°C Humidity: 20% to 85% RH (with no condensation)
Life time	White:30,000hrs, Red: 60,000hrs (Depends on the operating environment, not a gurantee)
Case material	Aluminum alloy, Resin

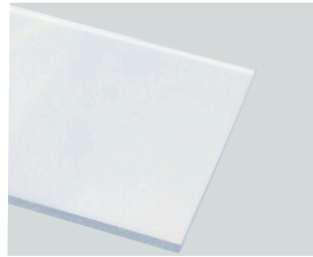
Explanation of Model Code

VT-LT2-HLMD	28	28	(W/B/G/R)
Series	Emitting Length	Emitting Width	Color



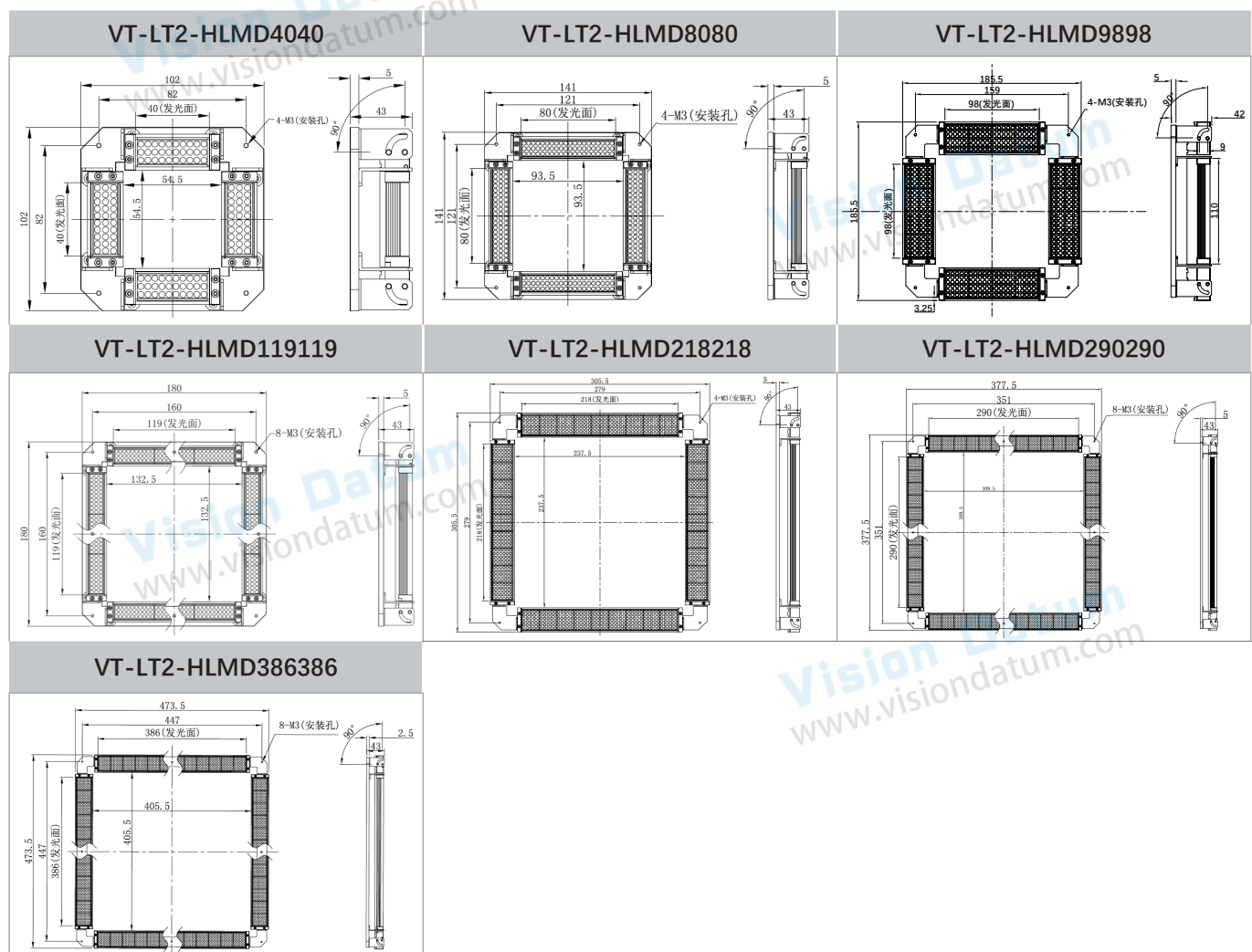
Optional Accessory: Diffusion Plate

To be mounted in front of the LED lighting.
Used to soften the lighting output, so as to reduce the glares on specular surface.



Model No.	Light Area		Inner Hole (mm)	Electrical specifications (NIR / UV Accept custom)			Dimensions		
	Length (mm)	Width (mm)		Supply Voltage (v)	Power cons. (w) ● ● ●	Power cons. (w) ● ● ●	Length (mm)	Width (mm)	Height (mm)
VT-LT2-HLMD4040	40	40	54.5×54.5	24	4×1.3	4×1.3	102	201	43
VT-LT2-HLMD8080	80	80	93.5×93.5	24	4×2.7	4×2.7	141	141	43
VT-LT2-HLMD9898	98	98	-	24	4×3.5	4×5.8	185.5	185.5	42
VT-LT2-HLMD119119	119	119	132.5×132.5	24	4×4	4×4	180	180	43
VT-LT2-HLMD218218	218	218	237.5×237.5	24	4×7.8	4×7.8	305.5	305.5	43
VT-LT2-HLMD290290	290	290	309.5×309.5	24	4×10.5	4×10.5	377.5	377.5	43
VT-LT2-HLMD386386	386	386	405.5×405.5	24	4×14.6	4×14.6	473.5	473.5	43

Dimension (mm)



Overview

Light Controller Collection



Model	Drive Mode	Input Voltage	Output Voltage	Power	Output Current	Channel	Output Port	Adapt to line light
Digital Controller								
VT-LT4-0506PWDC-2	Constant Current	88V-264V	5V	Total:6W/Single :3W Expandable: Total:12W/Single:6W	/	2	SMP-03V	
VT-LT4-2420PWDC-2	Constant Voltage	88V-264V	24V	Total:20W Single:20W	/	2	SMP-03V	
VT-LT4-2460PWDC-4	Constant Voltage	88V-264V	24V	Total:60W Single:25W	/	4	SMP-03V	
VT-LT4-24150PWDC-4	Constant Voltage	88V-264V	24V	Total:150W Single:70W	/	4	SMP-03V	
VT-LT3-24240PWDC-2	Constant Current	100V-120V(Ver.A) 200V-240V(Ver.B)	24V	240W	Total:10A Single:10A	2	19M-5	✓
VT-LT3-24500PWDC-2	Constant Voltage	100V-240V	24V	480W	Total:20A Single:light 9A, fan 1A	2	19M-2E	
VT-LT4-48300PWDC-1	Constant Current	90V-264V	48V	300W	0-6A	1	-	
Stroboscopic Controller (With Brightening Module)								
VT-LT3-PLU24120-4	Constant Voltage	100V-240V	48V	120W	10A(Instantaneous Value)	4	SMP-03V-BC	
VT-LT3-PLU24200-2	Constant Voltage	100V-240V	48V	200W	50A(Instantaneous Value)	2	12M-2	
VT-LT3-PLU24200-4	Constant Voltage	100V-240V	48V	200W	25A(Instantaneous Value)	4	SMP-03V-BC	
Line Source Stroboscopic Controller (With Brightening Module)								
VT-LT3-PLU481000LI-6	Constant Voltage	100V-240V	48V	1000W	Total:25A Single:25A	6	16M-2	✓
Line Source Controller								
VT-LT3-24300PWLI-1	Constant Voltage	100V-240V	24V	≤ 300W	12.5A	1	AM20K4Z	✓
VT-LT3-48600PWLI-2	Constant Current	100V-120V(Ver.A) 200V-240V(Ver.B)	48V	600W	Total:12A Single:6A	2	19M-6	✓
VT-LT3-48600PWLIN-1	Constant Current	100V-120V(Ver.A) 180V-240V(Ver.B)	48V	≤ 600W	Total:12A Single:6A	1	19M-6	✓
VT-LT3-48300PWLIN-2	Constant Current	100V-240V	48V	≤ 300W	Total:6A Single:6A	2	16M-6	✓
VT-LT3-48600PWLIN-2	Constant Current	180V-240V	48V	≤ 600W	Total:12A Single:6A	2	19M-6	✓
VT-LT3-48800PWLIN-1	Constant Current	100V-240V	48V	< 800W	14A	1	19M-6	✓
VT-LT3-48800PWLIN-2	Constant Current	100V-240V	48V	≤ 800W /Single ≤ 400W	14A	2	19M-6	✓
VT-LT3-481200PWLIN-1	Constant Current	100V-240V	48V	≤ 1200W	Total:24A Single:12A	1	19M-6	✓
Analog Controller								
VT-LT4-0506PWAC-2	Constant Current	88V-264V	5V	Total:6W Single:3W	/	2	SMP-03V	
VT-LT3-2460PWAC-4	Constant Voltage	100V-240V	24V	60W	Total:2.5A Single:2.5A	4	SMP-03V-BC	

Note: Default -Ver.B version voltage

2024

HOT PRODUCTS

Infrared Series Camera

- ◇ Near-Infrared(NIR) Industrial Cameras: 300-1100nm
- ◇ Short-Wave(SWIR) Industrial Cameras: 900-1700nm
- ◇ Cooled Mid-Wave Infrared(MWIR) Cameras: 1500-5200nm
- ◇ Long-Wave Infrared(LWIR) Industrial Cameras: 8000-14000nm



NIR



SWIR



MWIR



LWIR

High-Speed Camera

- ◇ 10GigE, SDI
- ◇ 1000 ~ 1000000 FPS

iSpeedy SE Series •



• iSpeedy Series

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让工业更智能，让视觉更简单！



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Macro Lens
Industrial Lens



Microscope



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