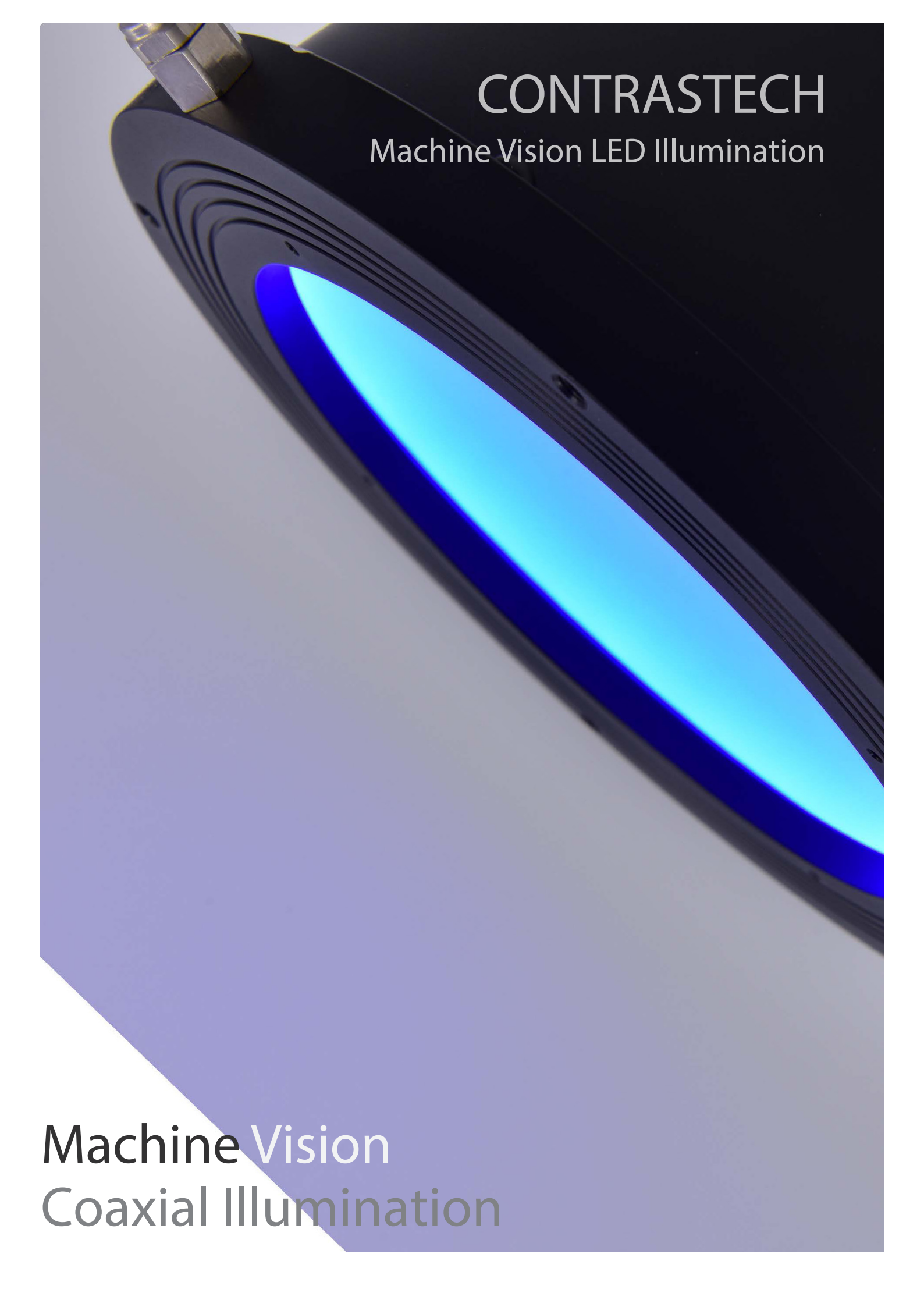




CONTRASTECH

Machine Vision LED Illumination

Machine Vision
Coaxial Illumination

CONTRAST^{TECH} LIGHTS

The Leader and Innovator in Machine Vision Lighting



ABOUT US

Contrasttech 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, Contrasttech 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.

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



BRIGHTER

Up to 10X brighter than normal lighting



BETTER

Extremely high-quality performance feedback, and the defect rate < 0.01%



COST-COMPETITIVE

Help our customers to save > 50% cost on lighting source



EXPERT

Leading designer and manufacturer of LED lighting solutions for any type of machine vision or automation camera application



FLEXIBILITY

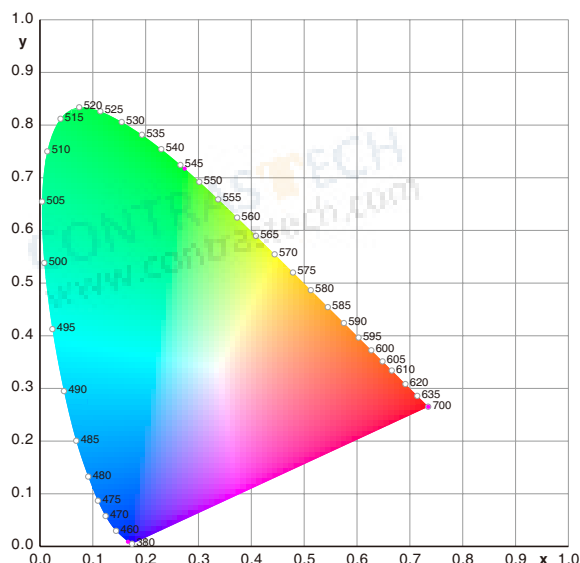
1 PC OEM / ODM available, including but not limited to IP67 / Anticorrosion requirement or IR / UV spectrum request

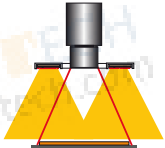
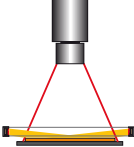
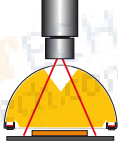
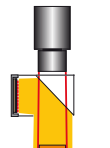
USEFUL INFORMATION

Color Wavelength

The durability of LEDs is on the upper area of the durability spectrum. The duration in which LED remains fully functional depends on the operating temperature and ambient temperature.

Vision Datum gives an extended guarantee on its LEDs. All housings, except some bar lights, are manufactured by high quality aluminum. Besides, the light intensity of all the lights can be regulated as well as flashed.



Illumination	Structure
Bright field illumination Light is aimed directly at an object, often creating distinct shadows. This type of light is effective when used on objects which requires high degrees of contrast, but will create specular reflections when used with shiny or reflective materials.	
Dark field illumination Light is projected at an angle to the surface, causing any variations to deflect light up into the camera, creating bright spots on a dark background or field. Nothing is seen by the vision system if there are no aberrations on the surface.	
Back illumination An even field of illumination is projected from behind an object, which is seen as a silhouette by the camera. Backlight is the most commonly used in taking measurements or determining part orientation.	
Diffuse illumination: (Dome/Tunnel) Reflected light, providing a non-directional, soft illumination free of harsh shadows, which is well suited for highly specular objects. This illumination effect is similar to the type of light found on an overcast day.	
Coaxial illumination: A variation of diffuse light in which light is aimed at an angled beam splitter that reflects the light down. The object is viewed from above through the beam splitter. This light type is particularly helpful on highly reflective objects or in situations where the area of inspection is obscured by shadows from its surroundings.	
Each light type has a specific purpose, but is also adaptable for a range of applications not immediately related to its function. For example, a spotlight, which provides bright field illumination, can be placed at an angle to create a dark field effect. For some applications, the best results are achieved by combining multiple light types.	

Coaxial Illumination

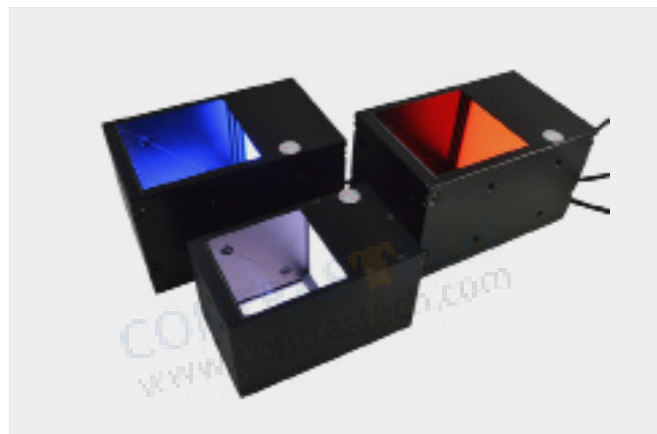
C Series

Features

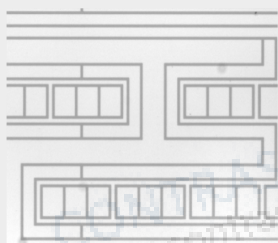
- High density LED provide high brightness light ray.
- Highly-accurate optical glass is used for the camera window and spectroscope.

Applications

- Inspection of high reflective surface scratches, defects of chip and silicon wafer, etc..
- Mark point position, laser character detection, bar code recognition

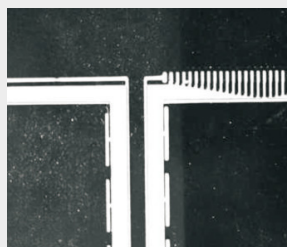


Examples of Coaxial Light Images



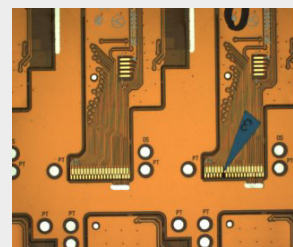
Lights: C40UV405

Checking ITO circuit in the touch screen with the new coaxial UV lighting, High brightness and uniformity.



Lights: C20R

Touch screen position alignment system



Lights: C50B

Checking the completeness of pins in FPC

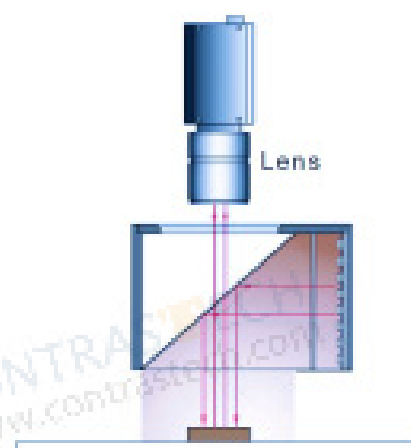
Explanation of Model Code

VT-LT2-C	19	19	(W/B/G/R)
Series	Emitting Length	Emitting Width	Color

Common Specifications

Input voltage	24 VDC
Connector	SMR-03V-B
Wavelength range	Red: 620-630nm; Blue: 460-475nm; Green: 520-530nm;
Color temperature (white)	5800-7500K
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 guarantee)
Case material	Aluminum alloy, Resin

Illumination Structure



Model No.	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)			Dimensions		
	Light Area		Supply Voltage (v)	Power cons. (w) ●	Power cons. (w) ● ○ ●	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)						
VT-LT2-C2020	20	20	24	2.2	2.1	64	31	27
VT-LT2-C3030	30	30	24	1.8	2.5	74	40	37
VT-LT2-C4038	40	38	24	2.7	3.3	52	50	47
VT-LT2-C4040	40	40	24	2.7	3.7	86	50	47
VT-LT2-C4440	44	40	24	4.0	5.5	86	50	48
VT-LT2-C5050	50	50	24	5.3	6.1	96	60	57
VT-LT2-C5450	54	50	24	4.0	6.5	96	60	58
VT-LT2-C6060	60	60	24	7.2	9.8	106	70	67
VT-LT2-C6460	64	60	24	7.0	10.8	106	70	68
VT-LT2-C7573	75	73	24	10.1	12.0	120	85.4	79
VT-LT2-C8583	85	83	24	13.2	17.1	130	95.4	89
VT-LT2-C100100	100	100	24	17.7	26.8	146	110	107
VT-LT2-C126126	126	126	24	12	18	165.5	134	133
VT-LT2-C134130	134	130	24	20	20	182	135	142
VT-LT2-C150120	150	120	24	14	21	166	160	127
VT-LT2-C200180	200	180	24	30	46	231.5	212	187
VT-LT2-C250190	250	190	24	37	56	264.5	262	197

Dimension (mm)

VT-LT2-C2020	VT-LT2-C3030	VT-LT2-C4038	VT-LT2-C4040
VT-LT2-C4440	VT-LT2-C5050	VT-LT2-C5450	VT-LT2-C6060

VT-LT2-C6460	VT-LT2-C7573	VT-LT2-C8583	VT-LT2-C100100
Technical drawing of VT-LT2-C6460 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C7573 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C8583 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C100100 showing front, side, and top views with dimensions.
VT-LT2-C126126	VT-LT2-C134130	VT-LT2-C150120	VT-LT2-C200180
Technical drawing of VT-LT2-C126126 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C134130 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C150120 showing front, side, and top views with dimensions.	Technical drawing of VT-LT2-C200180 showing front, side, and top views with dimensions.
VT-LT2-C250190			
Technical drawing of VT-LT2-C250190 showing front, side, and top views with dimensions.			

Parallel Coaxial Illumination

CPL Series

Features

- Special optical system and multi lens assembly ensure homogeneity and parallelism.
- Patented products with imported spectroscopes ensure image quality.

Applications

- Inspecting raised characters, scratches, watermarks on card.
- Inspection for surface indentation and scratches on flat hardware.



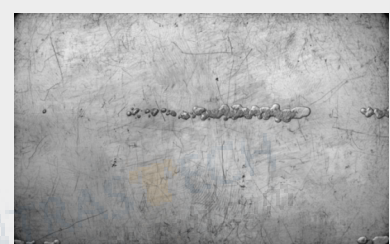
Examples of Coaxial Light Images



Light: CPL5050W
Highlight characters



Light: CPL6060W
Highlight scratches

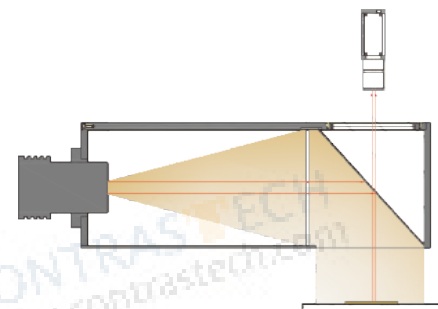


Light: CPL6060W
Highlight watermarks

Common Specifications

Input voltage	24 VDC
Connector	SMR-03V-B
Wavelength range	Red: 620-630nm; Blue: 460-475nm; Green: 520-530nm;
Color temperature (white)	6000-7500K
Operating environment (indoor)	Temperature: 0~40℃ 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

Illumination Structure

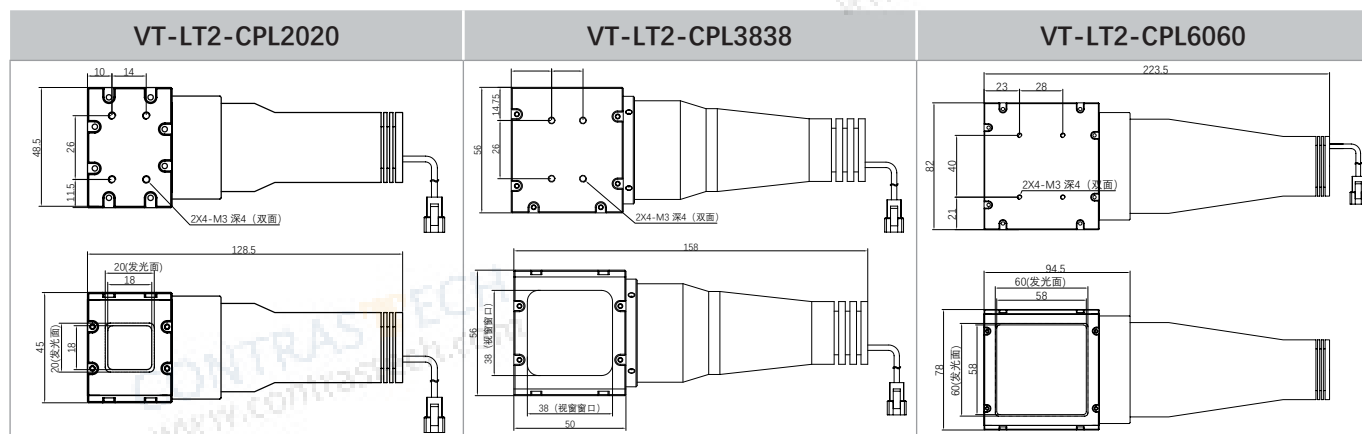


Explanation of Model Code

VT-LT2-CPL	50	50	(W/B/G/R)
Series	Emitting Length	Emitting Width	Color

	Optical spec.	Electrical specifications (GREEN / NIR / UV Accept custom)			Dimensions		
Model No.	Light Area (mm)	Supply Voltage (v)	Power cons. (w) 	Power cons. (w)   	Length (mm)	Width (mm)	Height (mm)
VT-LT2-CPL2020	20x20	5	-	1	128.5	45	48.5
VT-LT2-CPL3838	38x38	5	-	3	158	56	56
VT-LT2-CPL6060	60x60	5	-	3	223.5	78	82

Dimension (mm)



90° Turning Coaxial Illumination CX Series

Features

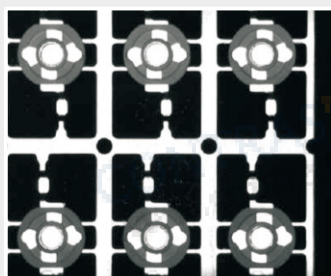
- Compact design with no fan and 90degree rotation, easy to installation.
- Special coating film on lens, providing excellent optic effects.

Applications

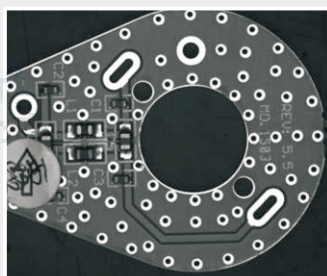
- Inspection of defects, faults, scratches on highly reflective surface, such as glossy surfaces or mirrors.
- Mark point position, laser character detection, bar code recognition



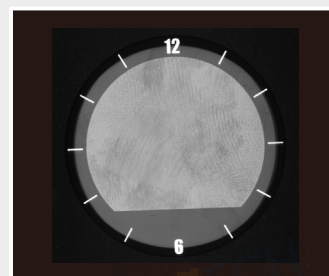
Examples of Coaxial Light Images



Light: CX60W
LED location alignment



Light: CX50R
Imaging of PCB copper

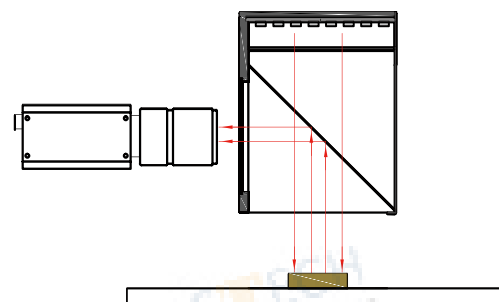


Light: CX30R
maging of scale angles on dial plate.

Common Specifications

Input voltage	24 VDC
Connector	SMR-03V-B
Wavelength range	Red: 620-630nm; Blue: 460-475nm; Green: 520-530nm;
Color temperature (white)	6000-7500K
Operating environment (indoor)	Temperature: 0~40℃ 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

Illumination Structure

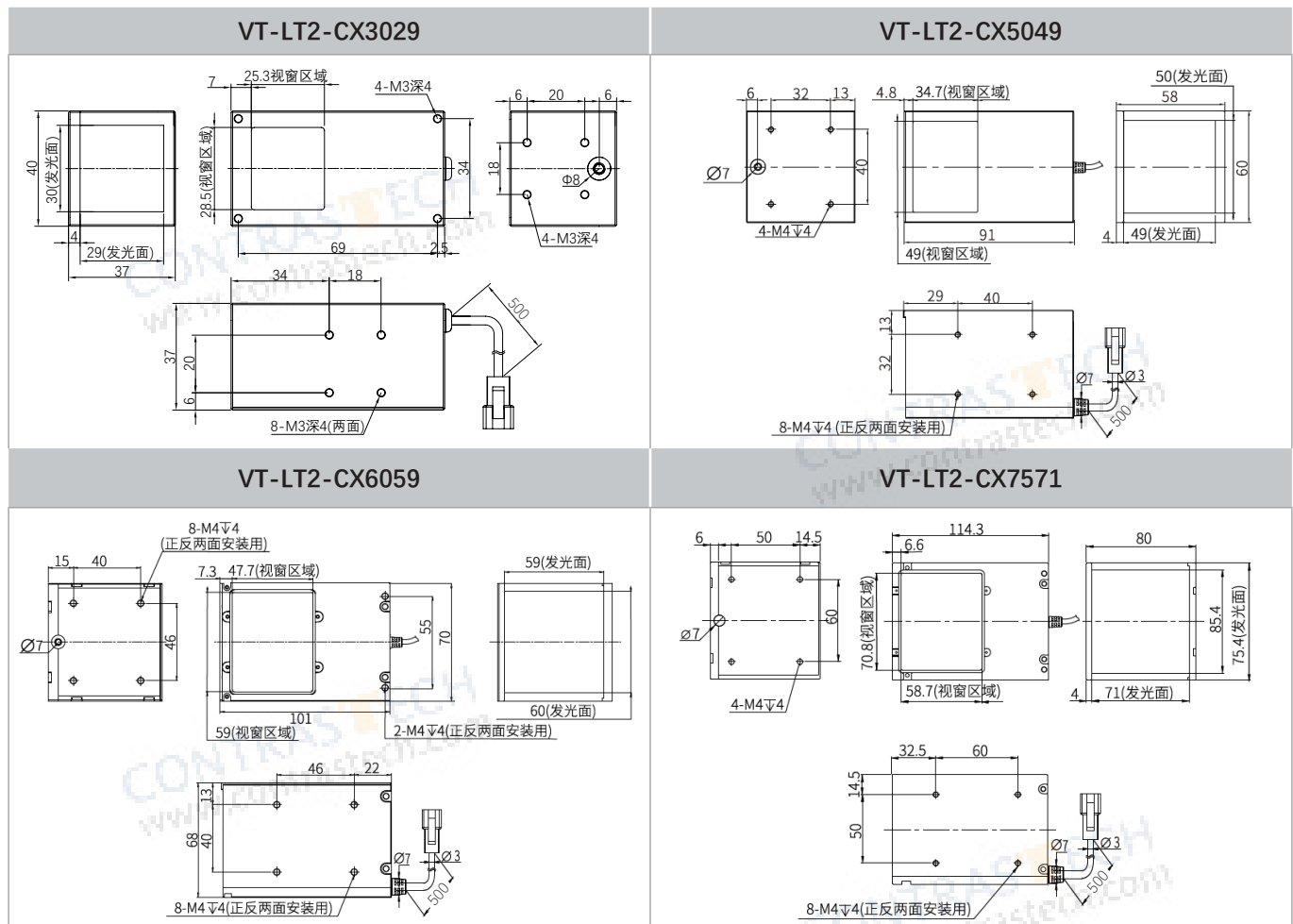


Explanation of Model Code

VT-LT2-CX	50	50	(W/B/G/R)
Series	Emitting Length	Emitting Width	Color

Model No.	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)			Dimensions		
	Light Area		Supply Voltage (v)	Power cons. (w)	Power cons. (w)	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)						
VT-LT2-CX3029	30	29	24	1.7	2.22	70	40	38
VT-LT2-CX5049	50	49	24	5.5	5.5	91	60	58
VT-LT2-CX6059	60	59	24	6.1	12.1	101	70	68
VT-LT2-CX7571	75.4	71	24	7.8	14.4	115	85.4	80

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: 400-1800nm
- ◇ 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

Vision And More Available

让工业更智能，让视觉更简单！



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Industrial Camera



Macro Lens
Industrial Lens



Microscope



System Solution
No-programming Software



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Ver.24.05