



CONTRASTECH

Machine Vision LED Illumination

Machine Vision
Line Scan Illumination

CONTRAST^{TECH} LIGHTS

The Leader and Innovator in Machine Vision Lighting



ABOUT US

Contrastech 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, Contrastech 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.

Contrastech products have been exported to almost 100 countries and regions, and in thousands of projects have received countless affirmations and reputations. Contrastech 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

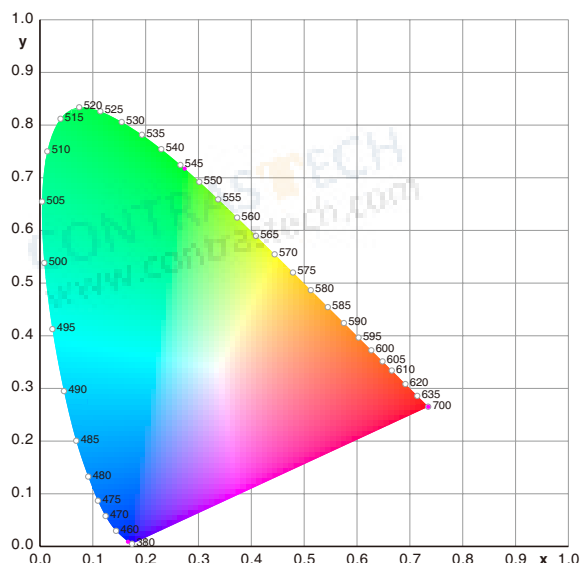
1 PC OEM / ODM available, including but not limited to IP67 / Anticorrosion requirement or IR / UV spectrum request

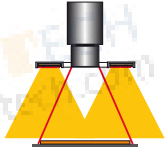
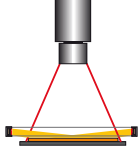
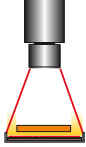
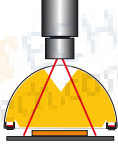
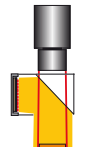
USEFUL INFORMATION

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.	

Line Scan Illumination

Li Series

Features

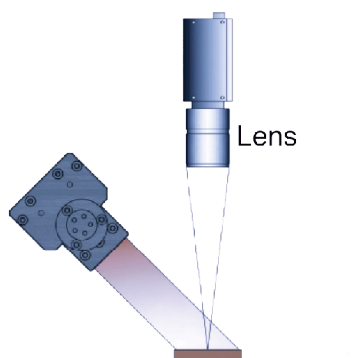
- Converging lights with optics cylindrical lens to reduce diffusion
- The width of emitting surface is variable as the distance between LED board and lens is adjustable.
- Light color, cooling method and emitting surface length can be customized according to request. The emitting surface length is specified in 100mm increments, up to 3000mm.

Applications

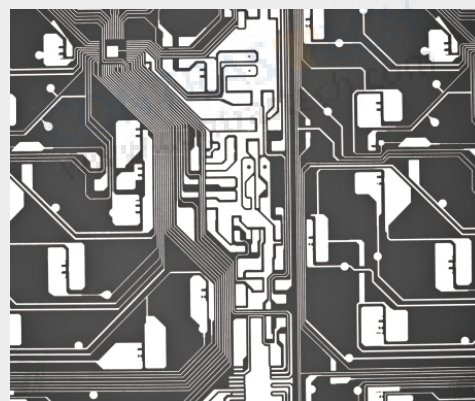
- Inspection of LCD, TP screen, LTO circuit, PCB circuit, medicine and food packaging, defects of printing surface on the assembly line, etc..
- Appearance inspection of food or medicine



Illumination Structure



Examples of Li Light Images



Common Specifications

Input voltage	24 VDC
Connector	20M-4J \ 20J4TQ \ AOPULO
Polarity	1: (-), 2: (-) ,3: (+), 4:(+)
Cable length	500 mm
Auxiliary module	VT-LT3-PiC Kit
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

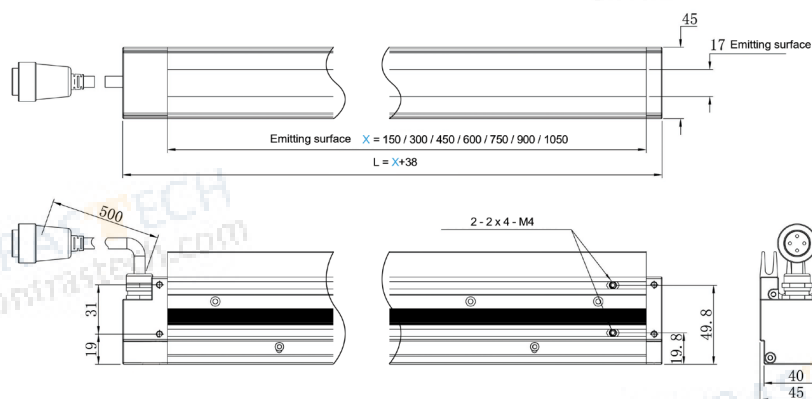
Explanation of Model Code

VT-LT3-Li	100	(W/B/G/R)
Series	Emitting Length	Color

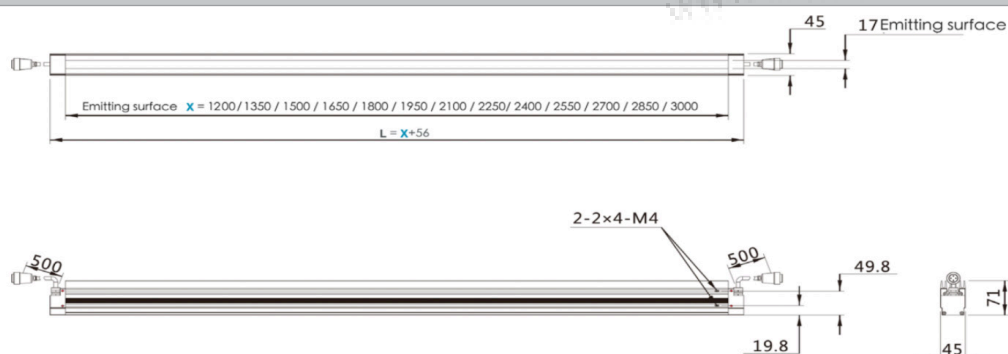
Model No.	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)			Dimensions		
	Length (mm)	Width (mm)	Supply Voltage (v)	Power cons. (w) ●	Power cons. (w) ● ○ ●	Length (mm)	Width (mm)	Height (mm)
VT-LT3-Li150	150	17	24	15.4	23.1	188	45	71
VT-LT3-Li300	300	17	24	30.8	46.1	338	45	71
VT-LT3-Li450	450	17	24	46.1	69.2	488	45	71
VT-LT3-Li600	600	17	24	61.5	92.2	638	45	71
VT-LT3-Li750	750	17	24	76.8	115.2	788	45	71
VT-LT3-Li900	900	17	24	92.2	138.3	938	45	71
VT-LT3-Li1050	1050	17	24	107.6	161.3	1088	45	71
VT-LT3-Li1200	1200	17	24	122.9	184.4	1256	45	71
VT-LT3-Li1350	1350	17	24	138.3	207.4	1406	45	71
VT-LT3-Li1500	1500	17	24	153.6	230.5	1556	45	71
VT-LT3-Li1650	1650	17	24	168.9	253.4	1706	45	71
VT-LT3-Li1800	1800	17	24	184.3	276.4	1856	45	71
VT-LT3-Li1950	1950	17	24	199.6	299.5	2006	45	71
VT-LT3-Li2100	2100	17	24	215.0	322.5	2156	45	71
VT-LT3-Li2250	2250	17	24	230.4	345.6	2306	45	71
VT-LT3-Li2400	2400	17	24	245.7	368.6	2456	45	71
VT-LT3-Li2550	2550	17	24	261.1	391.6	2606	45	71
VT-LT3-Li2700	2700	17	24	276.4	414.7	2756	45	71
VT-LT3-Li2850	2850	17	24	291.8	437.7	2906	45	71
VT-LT3-Li3000	3000	17	24	307.2	460.8	3056	45	71

Dimension

VT-LT3-Li150-1050



VT-LT3-Li1200-3000



Line Scan Illumination

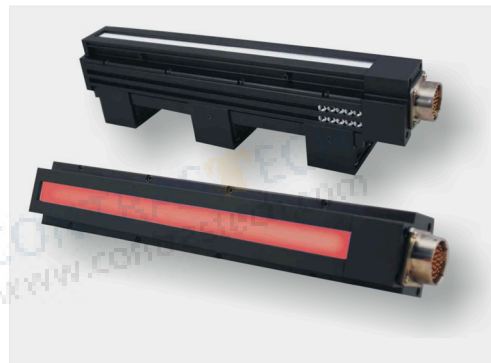
LiN + Series

Features

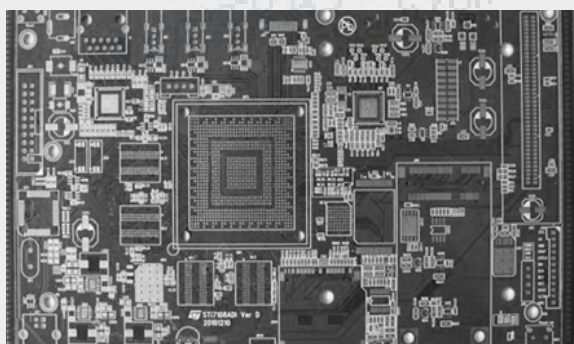
- With high power LEDs, the light intensity is times higher than standard one.
- Aluminum housings ensure an optimal heat dissipation and dispose of various practical mounting possibilities.

Applications

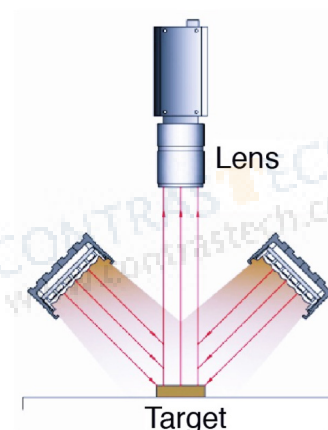
- Inspection of LCD, TP screen, LTO circuit, PCB circuit, medicine and food packaging, defects of printing surface on the assembly line, etc..
- Appearance inspection of food or medicine



Examples of LiN+ Series Images



Illumination Structure



Common Specifications

Input voltage	48 VDC
Connector	ZHQCN-19M-6H
Polarity	1:(Light source +), 2: (Light source -), 3:(Fan +), 4:(Fan -), 5:(R +), 6:(R -)
Cable length	/
Auxiliary module	VT-LT3-PiC+ Kit
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

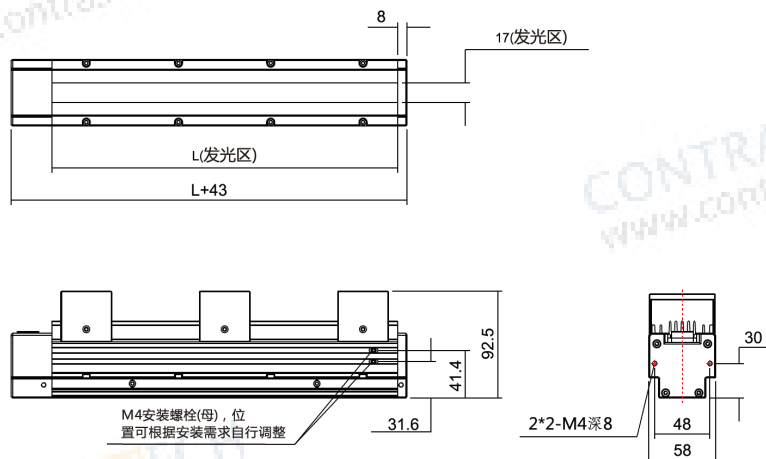
Explanation of Model Code

VT-LT3-LiN+	100
Series	Emitting Length

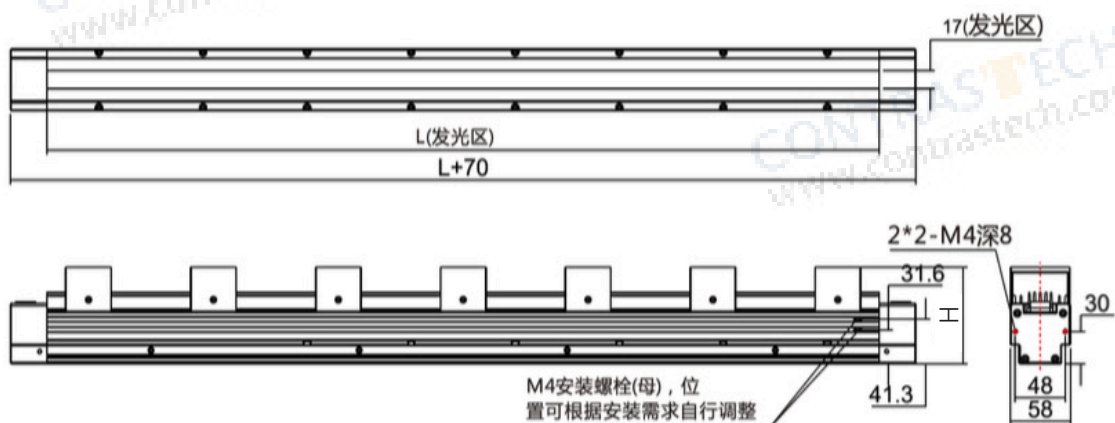
Model No.	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)		Dimensions		
	Light Area		Supply Voltage (v)	Power cons. (w) ● ○ ●	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)					
VT-LT3-LiN+100	100	17	48	-	143	58	90.1
VT-LT3-LiN+168	168	17	48	48	211	58	101.6
VT-LT3-LiN+200	200	17	48	-	243	58	90.1
VT-LT3-LiN+300	300	17	48	96	343	58	92.5
VT-LT3-LiN+400	400	17	48	129.6	443	58	92.5
VT-LT3-LiN+500	500	17	48	172.8	543	58	92.5
VT-LT3-LiN+600	600	17	48	216	643	58	92.5
VT-LT3-LiN+650	650	17	48	259.2	693	58	90.1
VT-LT3-LiN+700	700	17	48	-	770	58	90.1
VT-LT3-LiN+800	800	17	48	336	870	58	90.1
VT-LT3-LiN+900	900	17	48	384	970	58	90.1
VT-LT3-LiN+1000	1000	17	48	393.6	1070	58	90.1
VT-LT3-LiN+1100	1100	17	48	432	1170	58	90.1
VT-LT3-LiN+1200	1200	17	48	480	1270	58	90.1
VT-LT3-LiN+1800	1800	17	48	518.4	1870	58	90
VT-LT3-LiN+2200	2200	17	48	778	2270	58	90
VT-LT3-LiN+3400	3400	17	48	952	3470	-	91

Dimension

VT-LT3-LiN+100-650



VT-LT3-LiN+700-3400



H=Height

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-LT3-24300PWLIN-1	Constant Voltage	100V-240V	24V	≤ 300W	12.5A	1	AM20K4Z	✓
VT-LT3-48600PWLIN-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！



SWIR Camera
Industrial Camera



Macro Lens
Industrial Lens



Microscope



System Solution
No-programming Software



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