Vision Datum
Machine Vision LED Illumination

Machine Vision
Line Scan 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 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.

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
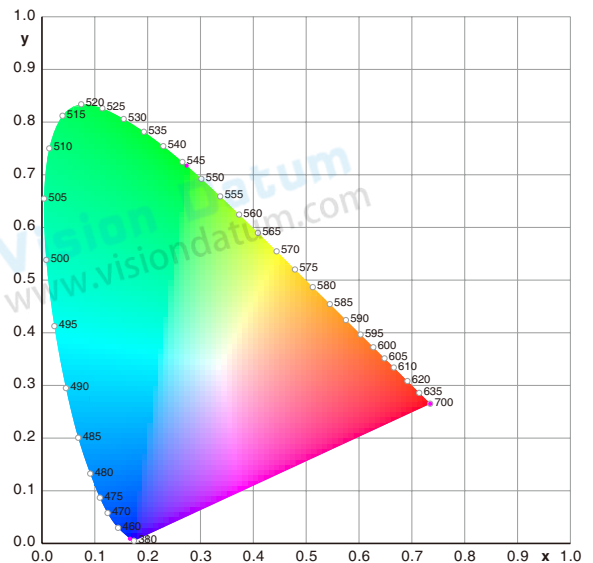
FLEXIBILITY

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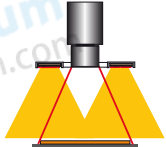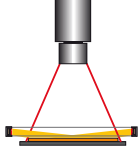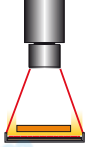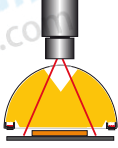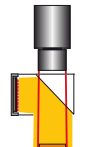
USEFUL INFORMATION

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 alumium. 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.

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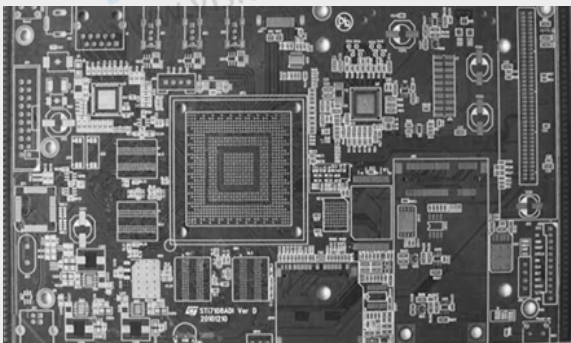
Line Scan Illumination
LiN + Series

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.
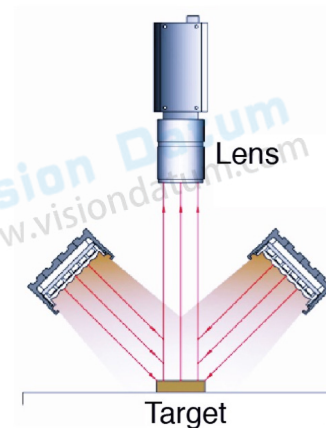
Applications

• 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

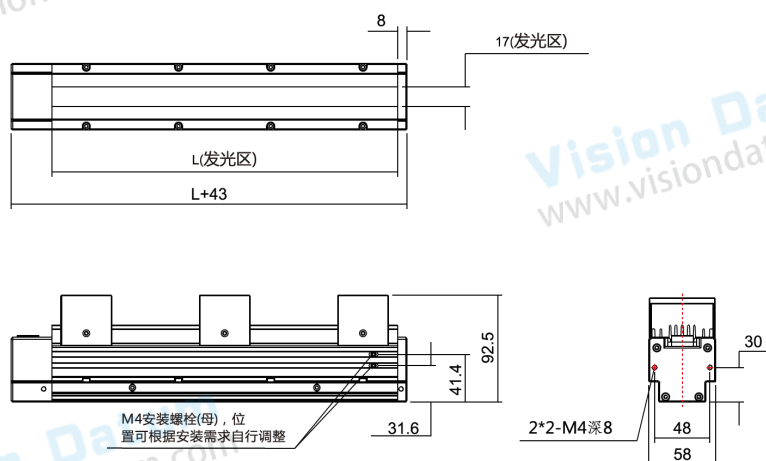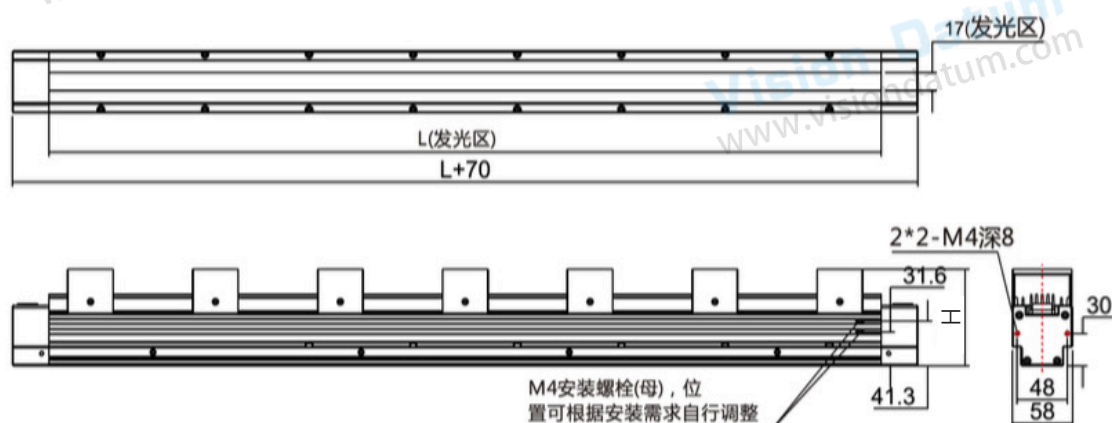| Input voltage	48 VDC
Connector	ZHQCN-19M-6H
Polarity	1:(Light source +), 2: (Light source -), 3:(Fan +), 4:(Fan -), 5:(R +), 6:(R -)
Cable length	/
Auxiliary module	VT-LT3-PiC+ Kit
Operating environment (indoor)	Temperature: 0~40℃ Humidity:20% to 85% RH (with no condensation)
Life time	White:30,000hrs, 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-LT3-24300PWLI-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

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

微图视觉
Vision Datum

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Ver.24.05