



# Vision Datum

Machine Vision LED Illumination

Machine Vision  
Line Scan Illumination

# ViSiON DATUM LIGHTS

The Leader and Innovator in Machine Vision Lighting



## 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

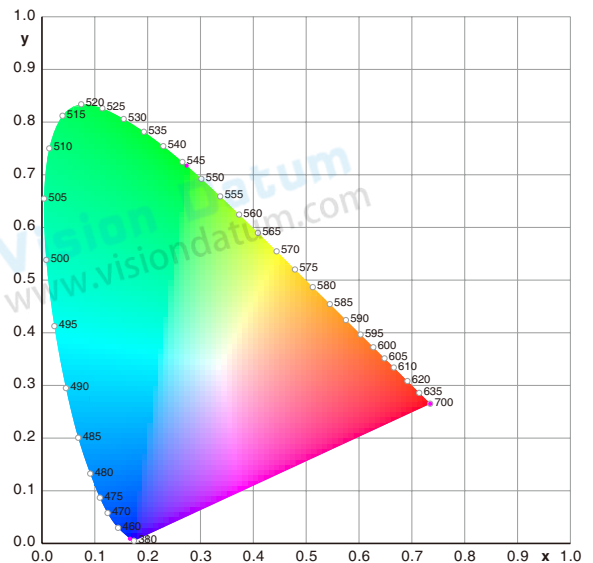
1 PC OEM / ODM available, including but not limited to IP67 / Anticorrosion requirement or IR / UV spectrum request

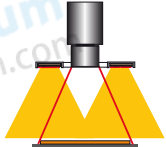
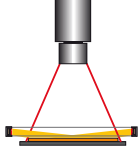
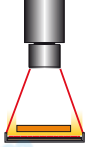
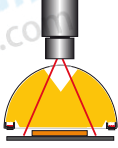
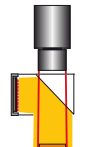
## USEFUL INFORMATION

### 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 aluminum. Besides, the light intensity of all the lights can be regulated as well as flashed.



Illumination	Structure
<b>Bright field illumination</b> 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.	
<b>Dark field illumination</b> 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.	
<b>Back illumination</b> 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.	
<b>Diffuse illumination: (Dome/Tunnel)</b> 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.	
<b>Coaxial illumination:</b> 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

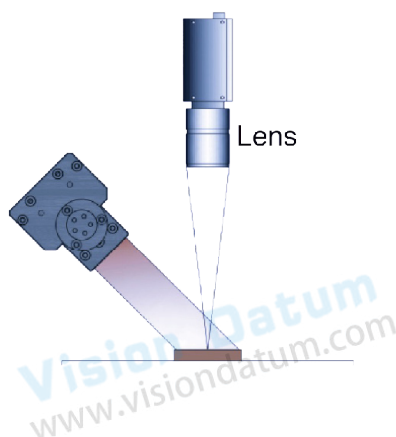
### Features

- 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.

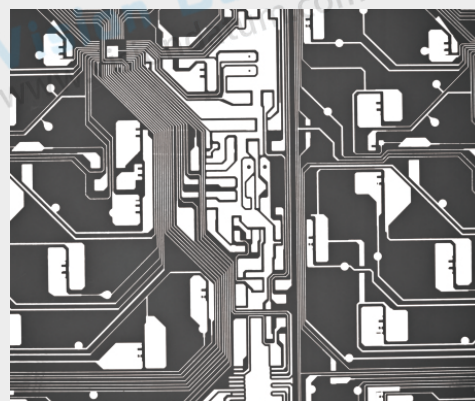
### Applications

- 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

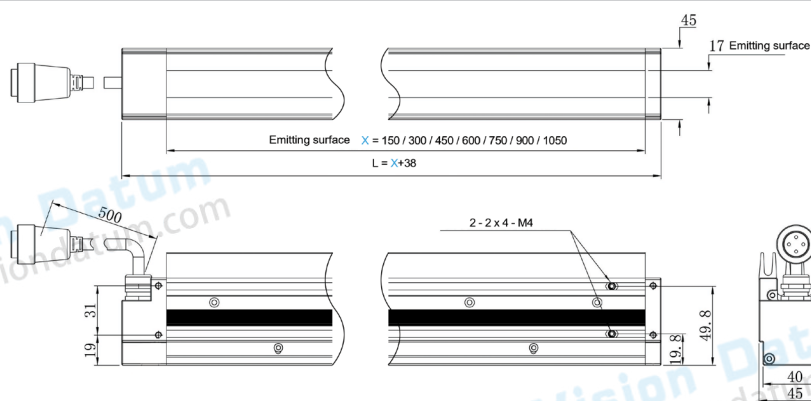
VT-LT3-Li	100	(W/B/G/R)
Series	Emitting Length	Color



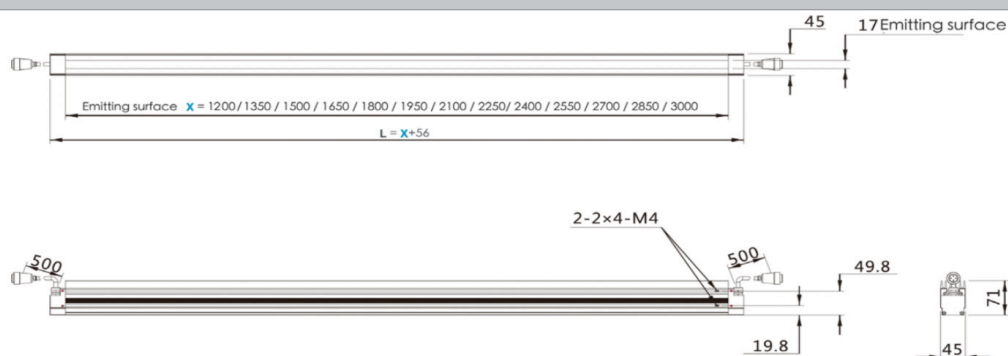
	Optical spec.		Electrical specifications (GREEN / NIR / UV Accept custom)			Dimensions		
Model No.	Light Area		Supply Voltage (v)	Power cons. (w) ●	Power cons. (w) ● ○ ●	Length (mm)	Width (mm)	Height (mm)
	Length (mm)	Width (mm)						
VT-LT3-Li150	150	17	24	15.4	23.1	188	45	71
VT-LT3-Li300	300	17	24	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



# Overview

## Light Controller Collection



Model	Drive Mode	Input Voltage	Output Voltage	Power	Output Current	Channel	Output Port	Adapt to line light
<b>Digital Controller</b>								
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	-	
<b>Stroboscopic Controller (With Brightening Module)</b>								
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	
<b>Line Source Stroboscopic Controller (With Brightening Module)</b>								
VT-LT3-PLU481000LI-6	Constant Voltage	100V-240V	48V	1000W	Total:25A Single:25A	6	16M-2	✓
<b>Line Source Controller</b>								
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	✓
<b>Analog Controller</b>								
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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Ver.24.05