



A 210lm/w
Ultra-High Luminous Efficacy Street Light Module

HUO-121SA-024016

LED Module Datasheet

The HIGNTEK HUO-121SA-024016 product is a high-performance LED module engineered for demanding outdoor illumination, including street lights, tunnel lighting, and industrial area applications. The product uses UHE-3030 led chip to make the module with exceptional brightness. Its modular design allows for easy installation and maintenance. The compact size and robust construction make it ideal for urban roads, industrial areas, and public spaces.

FEATURES AND BENEFITS

Efficacy and luminous flux of up to 216lm/W typical and 6067lm available

Available CCT/CRI options: 2700K-6500K(70 & 80 CRI)

Designed to be compatible with standard third party optics

MCPCB for efficient heat dissipation and mechanical robustness

CE, ROHS, ERP compliance

5-year limited guarantee

PRIMARY APPLICATIONS

Street Light

Flood and area lighting

Tunnel lighting



Performance Characteristics

Product Selection Guide

Table 1. Product performance of HIGNTEK HUO-121SA-024016 (T_p=25°C)

NOMINAL CCT	CRI [RA]	CURRENT [mA]	FORWARD VOLTAGE [V]	POWER [W]	LUMINOUS FLUX [lm]		EFFICACY [lm/W]	
					T _c = 25° C	T _c = 80° C	T _c = 25° C	T _c = 80° C
3000K	70	424	22.2	9.41	1827	1663	194	182
	70	530	22.5	11.93	2254	2051	189	178
	70	1050	23.9	24.78	4044	3680	163	153
4000K	70	424	22.2	9.41	1965	1788	209	196
	70	530	22.5	11.93	2424	2206	203	191
	70	1050	23.6	24.78	4348	3957	175	165
6500K	70	424	22.2	9.41	1945	1663	207	195
	70	530	22.5	11.93	2400	2184	201	189
	70	1050	23.9	24.78	4305	3918	174	194
3000K	80	424	22.2	9.41	1699	1546	181	170
	80	530	22.5	11.93	2096	1907	176	165
	80	1050	23.9	24.78	3761	3423	152	143
4000K	80	424	22.2	9.41	1827	1663	194	182
	80	530	22.5	11.93	2254	2051	189	178
	80	1050	23.9	24.78	4044	3680	163	153
6500K	80	424	22.2	9.41	1809	1646	192	180
	80	530	22.5	11.93	2232	2031	187	176
	80	1050	23.9	24.78	4004	3644	162	152

Notes for Table1:

1. T_c: temperature at which performance is specified measured at "T_c point".
2. HIGNTEK maintains a measurement tolerance of : Luminous flux: ± 7 %, CRI: ± 3.0,.
3. Measurement tolerance of CCT is ± 5%.
4. HUO-121SA-024016 Color temperature (2700K-6500K) is optional.

Product Code Information

Table 2. Product Code-HUO-121SA-024016-XXX

CRI [RA]	NOMINAL CCT	PRODUCT CODE
70	2700K	HUO-121SA-024016-277
	3000K	HUO-121SA-024016-307
	3500K	HUO-121SA-024016-357
	4000K	HUO-121SA-024016-407
	5000K	HUO-121SA-024016-507
	5700K	HUO-121SA-024016-577
	6500K	HUO-121SA-024016-657
80	2700K	HUO-121SA-024016-278
	3000K	HUO-121SA-024016-308
	3500K	HUO-121SA-024016-358
	4000K	HUO-121SA-024016-408
	5000K	HUO-121SA-024016-508
	5700K	HUO-121SA-024016-578
	6500K	HUO-121SA-024016-658

Electrical Characteristics

Table 3. Electrical characteristics for HIGNTEK HUO-121SA-024016

PARAMETER	SYMBOL	VALUE			UNIT	REMARK
		MIN.	TYP.	MAX.		
Operating Current	I_F	-	530	1050	mA	-
Operating Voltage	V_F	20.9	22.5	23.0	Vdc	$I_F = 530 \text{ mA}$
Power Consumption	P	11.08	11.90	12.19	W	$T_P = 80 \text{ }^\circ\text{C}$

Notes for Table3:

1. T_c : temperature at which performance is specified measured at "Tc point".
2. HIGNTEK maintains a tolerance of $\pm 0.1\text{V}$ on forward voltage measurements.

Absolute Maximum Ratings

Table 4. Maximum Operating Specification ($T_p=25^{\circ}\text{C}$)

PART NUMBER	PARAMETER	SYMBOL	UNIT	RATING
HUO-121SA-024016-XXX	Power Consumption	P	W	24
	DC Forward Current	I_F	mA	1050
	Operating Temperature	-	$^{\circ}\text{C}$	-40 to 85
	Storage Temperature	T_{Ctg}	$^{\circ}\text{C}$	-20 to 105
	ESD Sensitivity	-	KV	3
	Beam Angle	$\angle$	$^{\circ}$	120
	IP Grade	-	-	IP20
	Maximum Reverse Voltage	V_{BRM}	V	Module are not designed to be driven in reverse bias

Notes for Table4:

1. T_p : temperature at which performance is specified measured at " T_c point".

Characteristics Curves

$T_c [^{\circ}\text{C}]$	Flux [%]	Efficacy [%]
95	97	98
80	100	100
45	106	104
25	109	106
0	112	108

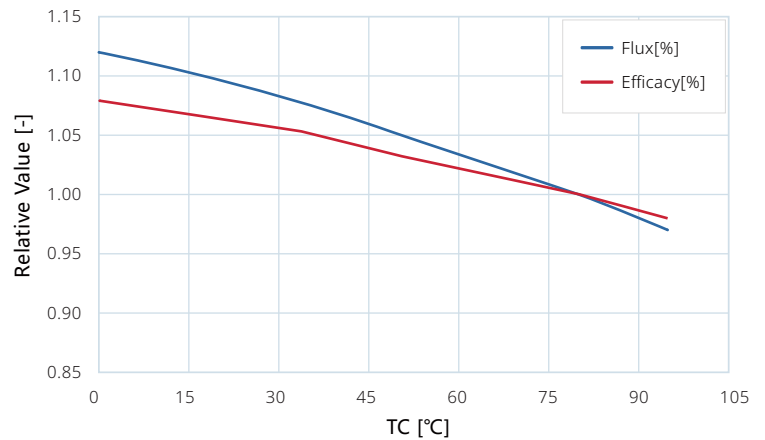


Figure 1. Typical normalized Flux and Efficacy vs. T_c temperature for HIGNTEK HUO-121SA-024016.

I [mA]	Flux [%]	Efficacy [%]
1050	179	86
530	100	100
424	81	103
265	51	105

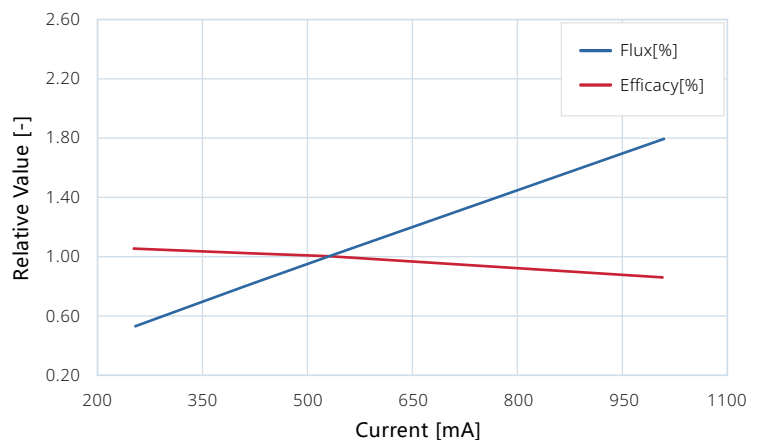


Figure 2. Typical normalized Flux and Efficacy vs. Current for HIGNTEK HUO-121SA-024016.

Mechanical Dimensions

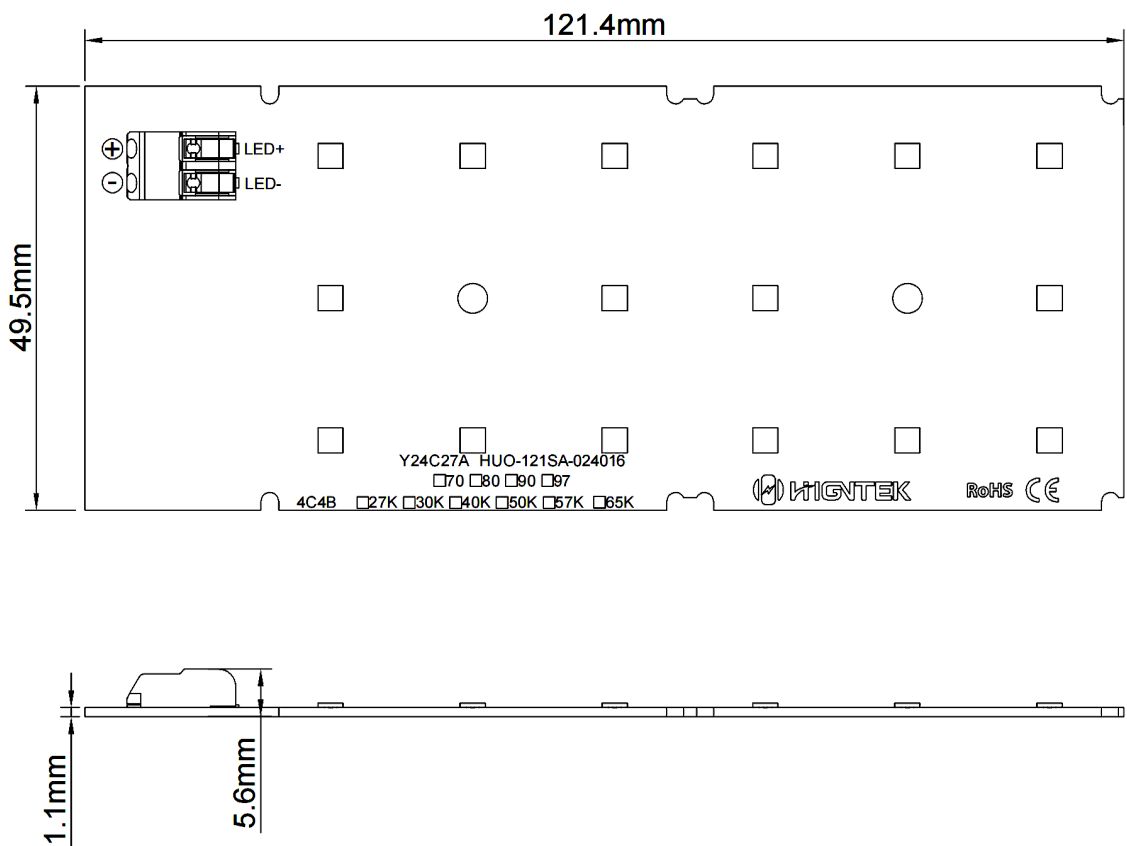


Figure 3. Mechanical Dimensions for HIGNTEK HUO-121SA-024016.

Notes for Figure 3:
1. Drawings are not to scale.
2. All dimensions are in millimeters.

Table 5. Bill of Materials for HIGNTEK HUO-121SA-024016.

COMPONENT	SPECIFICATION PARAMETERS	QUANTITY
LED:3030	LUMILEDS 3030 6V	16
PCB: MCPCB	121.4*49.5 *1.6mm	1
SMD PCB terminal block	WAGO_2060-452/998-404	1

Notes for Table5:
1. Resistance specifications are adjusted according to different power.

Optional Branding (LED)



About HengXinYuan

Hengxinyuan is a professional lighting solutions company that helps customers deliver differentiated solutions to gain and maintain a competitive edge. The company's broad product portfolio includes a wide array of package and device choices such as CREE led, SUMSUNG led, LUMILEDS led, UHE led, Indoor lighting module and Outdoor lighting module. Hengxinyuan's LED products pursue high efficiency, high quality, and high reliability, and aim to meet the needs of customers to the greatest extent. With the supply of high-standard supply chain services as the driving force, they contribute to the development of global LED green and healthy lighting power.