

SPECIFICATION

Product name : LBS-150W-260X

Release date : 2024/6/20

	Product Type	LED INTEGRATED SPECIAL DRIVER		
	Product Series	LBS-150W-260X Series	REV	V1.0

Features

- Class I type for insulation
- Input voltage range:120-277V ~ 50/60Hz
- Efficiency 94% (Typ.)
- Constant current output ,with power limitation for control mode
- Metal material case, protection grade against water and dust: IP67
- Surge level:
 - differential mode : 6kV
 - common mode :6kV
- Function available:
 - Output current is dimmed by external potentiometer (Only Type A)
 - Output current is dimmed by Isolated 3 in 1 dimmer (Only Type P)
 - Output current is dimmed by light intensity (Only Type L)
- guaranteed Lifetime : 5 years



Applications

Street lighting、Industrial lighting、Stadium lighting
Floodlight lighting、Landscape lighting 、Plant lighting

Model list

Model NO.	Rated Input voltage	Max Output power	Output voltage	The default current	Eff.
LBS-150W-260A	120-277V 50/60Hz	150W	180-260Vdc Rated Power (200-260V)	0.7A	≥94%
LBS-150W-260P	(Drop power is used with				
LBS-150W-260L	input less than 120 Vac)				

Note:

1. Test conditions: Ta=25°C, under 230Vac input,after running for 30 minutes with full load .
2. When the input is less than 100Vac, the undervoltage protection power is reduced by 50%. Input 100-120 Vac, rated power of 256W; input 120-277 Vac, rated power of 150W. Please refer to “THE OUTPUT POWER VS INPUT VOLTAGE” curve chart for details.

edition	potentiometer	1-10V/PWM/Resistor	AUX 12V	Off-line programming	External optical control cable	remark
A	√					
B	√	√				0-10V dimming, when the dimming signal is 0V, the Vout drops to 40% of the rated voltage, the lamp board is discharged through the Y capacitor, and there is a slight bright phenomenon (afterglow).
XP						
L	√				√	

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Input characteristics

Parameter	Min	Typ.	Max	Remark
Rated input voltage	120Vac	230Vac	277Vac	-
Input voltage range	90Vac	-	305Vac	-
Rated frequency range	47Hz	50/60Hz	63Hz	-
Power factor	0.95	-	-	@230Vac input ,with full load
Power factor	0.9	-	-	@200-277Vac input ,with 70%-100%
T.H.D.	-	-	10%	@230Vac input ,with full load
T.H.D.	-	-	20%	@200-277Vac input ,with 70%-100%
Input current	-	-	1.52A	@200Vac input ,with full load
Inrush current	-	-	100A	230Vac, cold start (25°C)

Output characteristics

Parameter	Min	Typ.	Max	Remark
Rated current	-	0.57A	-	Rated Load :260VDC
Output current range	0.4A		0.75A	-
Output voltage range	180V		260V	Constant power output range:200-260VDC
Available power(100-120Vac)	-	120W	-	Decrease to a half once input voltage being less than 100 Vac
Rated power(120-277Vac)	-	150W	-	-
No-load voltage			310V	

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Output characteristics

Parameter	Min	Typ.	Max	Remark
Efficiency@230Vac	-	94.0%	-	@230Vac input ,with full load
Accuracy of output current	-3%	-	+3%	For constant-power range , with full load
Output current Ripple (PK-AV)	-	5%	-	100% load, 20 MHz BW
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	100% load, DC: 200-260V
Load regulation	-5%	-	+5%	100% load, DC: 180-260V
Starting time	-	-	500ms	Full load@230Vac

Note: 1.The output current is limited by the input and output voltage, please refer to “I-V WORKING AREA” for details;

Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
1-10V Dimming (Optional)	Safe operation voltage range	0V	-	10V	Beyond the range may lead to a failure of the driver.
	Dimming output range	10%	-	100%	-
	Rated operation voltage range	0V	-	10V	-
PWM Dimming (Optional)	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	0.3V	-
	Rated dimming frequency	300Hz	-	2000Hz	-
	PWM duty cycle	10%	-	99%	full power output at 99%duty cycle
Resistor Dimming (Optional)	Rated external resistance value	10KΩ	-	100KΩ	-
	Dimming output range	10%	-	100%	-

Note:

- 1.Output current of dimming port: 100uA (typical value).
- 2.The maximum operation voltage for the dimming port is 12V. Wrong voltage beyond the range or a reverse connection may lead to a critical failure of the driver.
- 3.This product has 0-10V dimming function, standby power consumption >0.5W when 0V dim -off, 1-10V dimming is recommended at

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the terminal use.

Protections

Protection	description
under-voltage protection	When the input voltage is less than $95 \pm 5V_{ac}$, the power derates gradually to 75W, as shown in the derating curve
Output overload protection	Protection mode:hiccup mode,and recovers automatically when the fault condition is removed.
Output short circuit protection	Hiccup mode,and recovery automatically when the fault condition is removed.
Over temperature protection	Could recover automatically; when the temperature of the case is greater than $90^{\circ}C$, the output power decreases to a half.
Output over-voltage protection	Protection mode:Hiccup or clamp at a certain output highest voltage state, the product will not be damaged, when the fault is removed, the driver works normally

Note:

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of $25^{\circ}C$;
2. Including setting error, linear adjustment rate and load adjustment rate;

Environmental characteristics

Environmental categories	Parameter
Working temperature	$-40 \sim +55^{\circ}C @ 200-277V_{ac}$ ((Refer to "Service Life Curve"))
Safety case temperature	$-40 \sim 90^{\circ}C$
Working humidity	20 ~ 95% RH,non-condensing
Storage temperature、humidity	$-40 \sim +80^{\circ}C$, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	230Khrs min. MIL-HDBK-217F ($T_a=25^{\circ}C$)
Lifetime	50000 hours @230Vac,80% load, $T_{case}=75^{\circ}C$,.Refer to” T_{case} VS Lifetime” curve for details.

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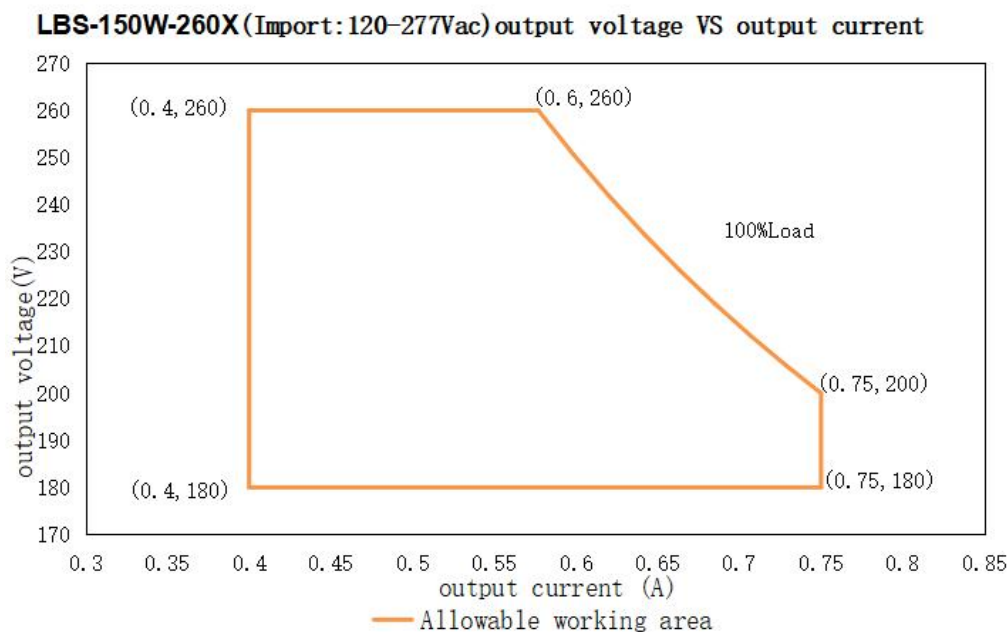
Safety and EMC

Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384;
EMC	EN 55015、EN 61547、EN 61000-3-2、GB/T 17743、GB17625.1、EN 61000-3-3
Surge level	Differential mode L-N $\pm 6\text{KV}(2\Omega)$, common mode L, N-PE $\pm 6\text{KV}(12\Omega)$ Refer to IEC61000-4-5 2014
High-pot test	I/P-PE:1.5KVac I/P-DIM:3.75KVac
Insulation impedance	I/P-PE :10M Ω / 500VDC / 25 $^{\circ}\text{C}$ / 70% RH
Leakage current	<0.7mA@277Vac

Note:

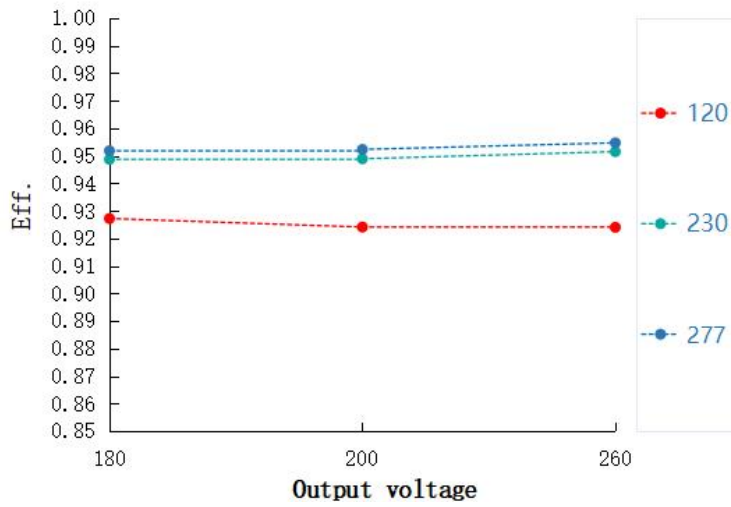
1.Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

I-V Working area

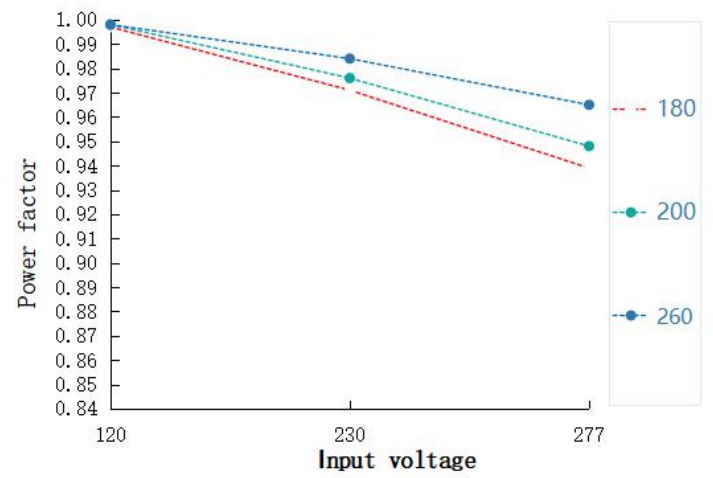


Load	Output								
Load working Voltage	180V	190V	200V	210V	220V	230V	240V	250V	260V
Io_MAX	0.750A	0.750A	0.750A	0.715A	0.682A	0.650A	0.628A	0.600A	0.580A
Po_MAX	135W	142W	150W	150W	150W	150W	150W	150W	150W

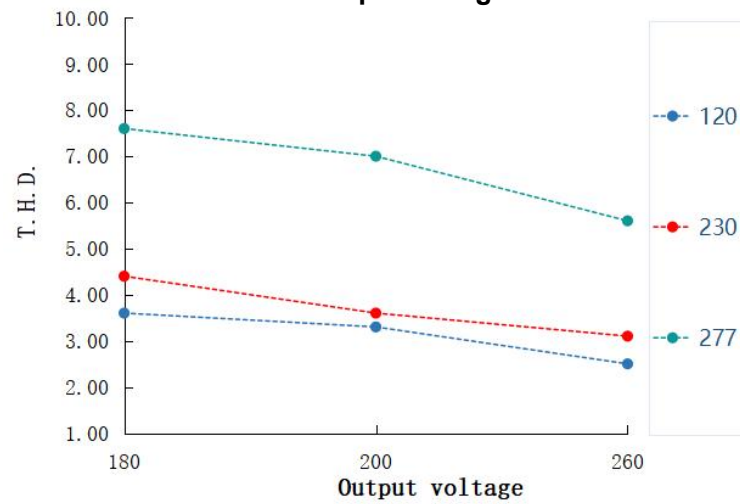
Eff. VS Output voltage



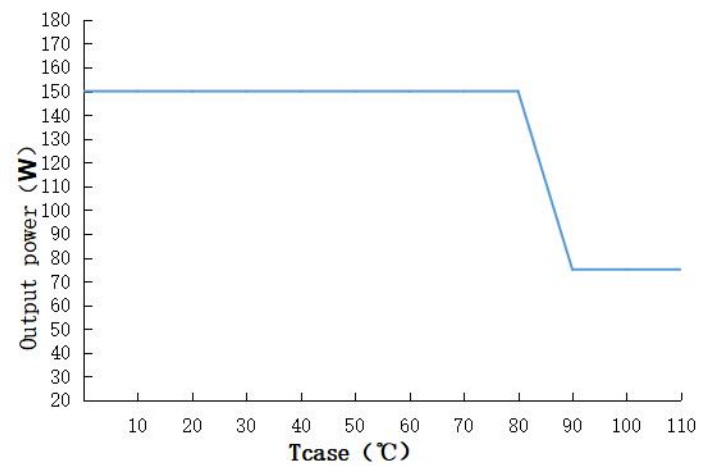
Power factor VS Input voltage



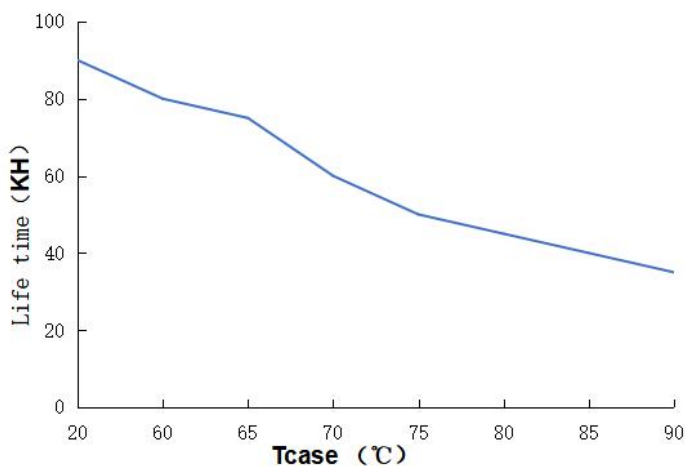
T.H.D. VS Output voltage



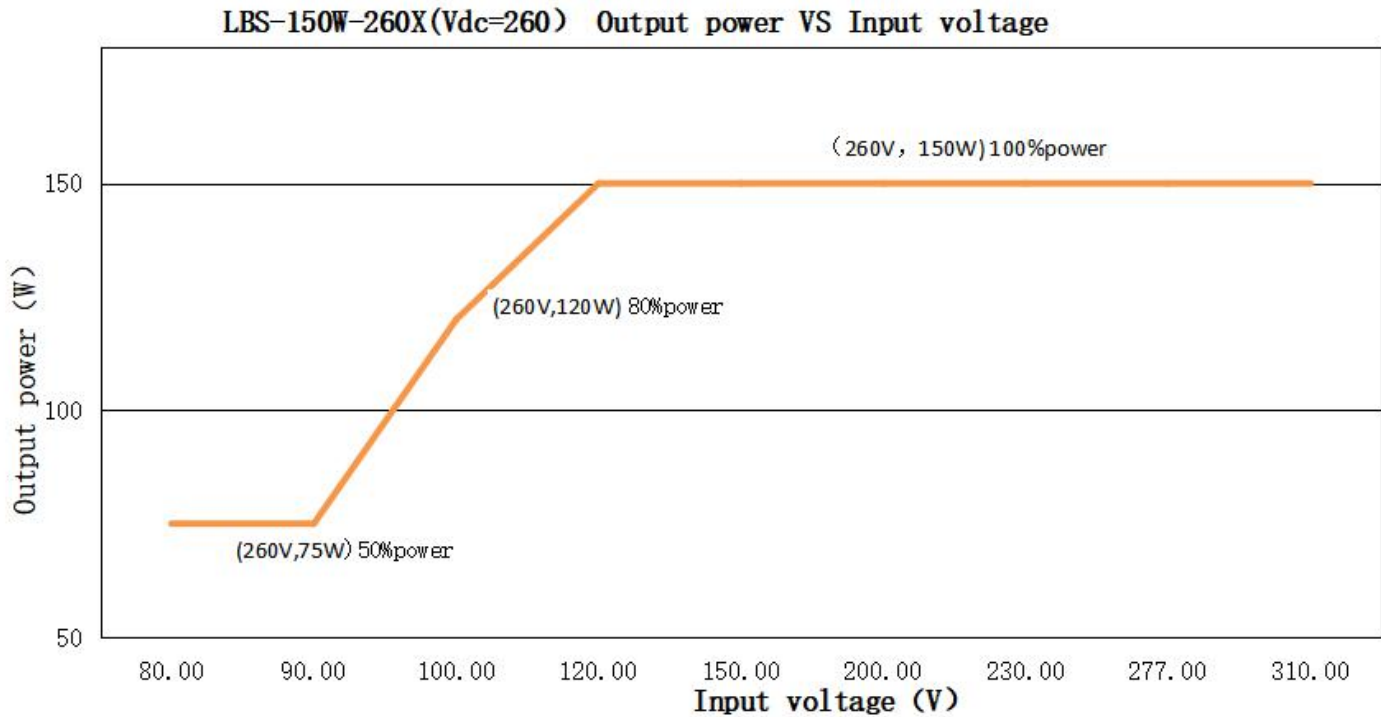
Output power VS Tcase



Tcase VS Life time



Output power VS Input voltage



The rated output current & power under different input voltage

Input Voltage	90Vac	100Vac	108Vac	120Vac	180Vac	230Vac	277Vac
Io	0.375A	0.375A	0.6A	0.75A	0.75A	0.75A	0.75A
Po	75W	75W	120W	150W	150W	150W	150W

Note:

- When the input voltage is lower than 100Vac, the output power gradually derates to 75W. For details, see the figure above.

Note: L version light Illuminance value standard (LUX)

testing environment	Starting illumination value (LUX)	Turn off illuminance value (LUX)
natural light	≤70	≥140

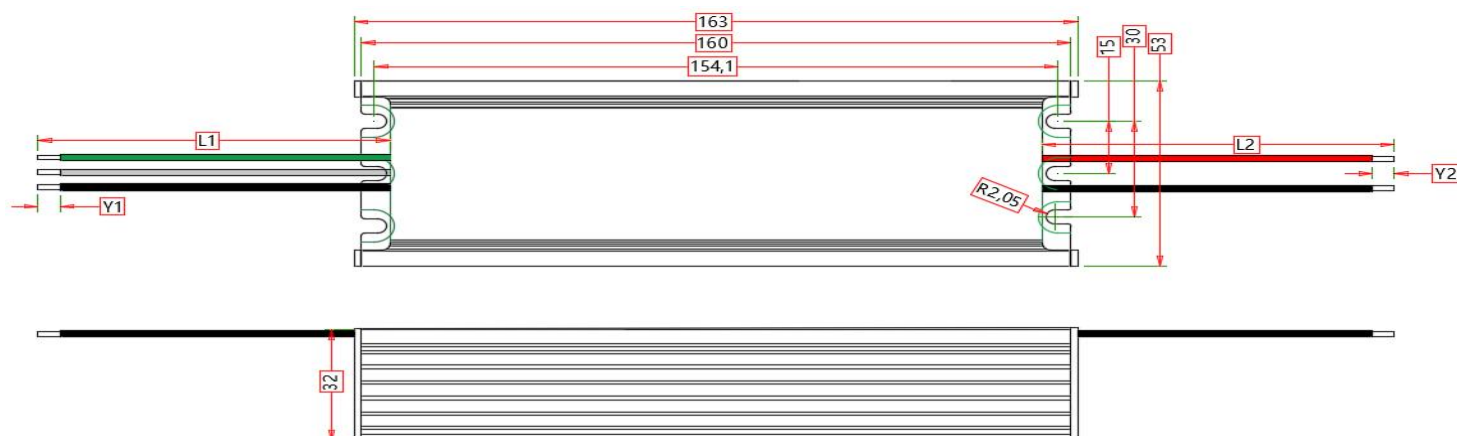
Note: This value is the test data in the open air with the optical sensor head facing 90° up. This test value standard is for reference only

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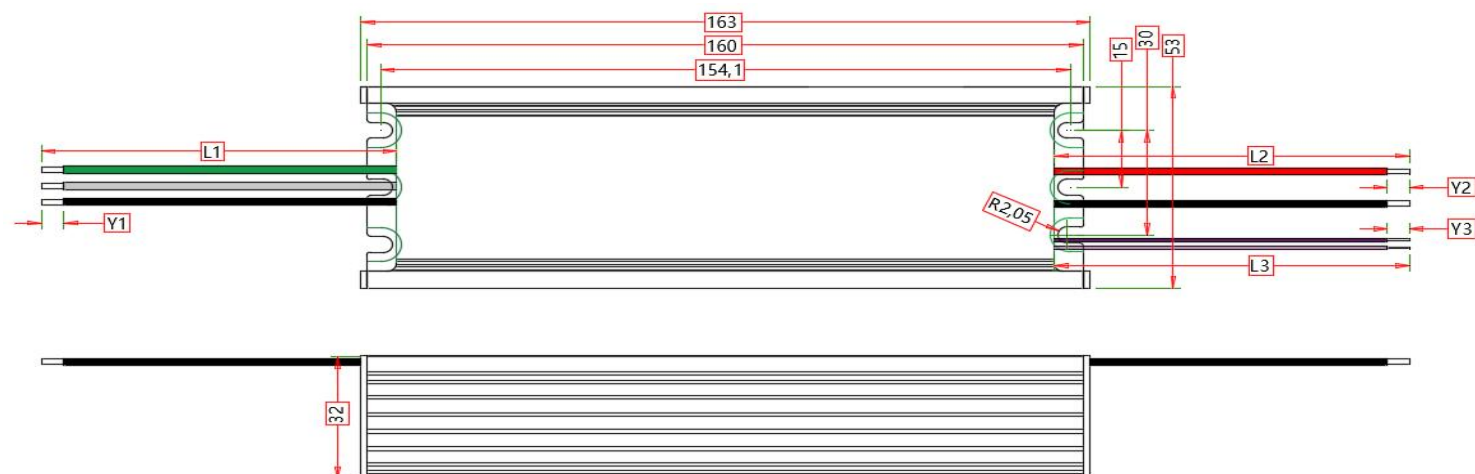
Mechanical specification

Size (mm)	L 163 mm*W 53 mm*H 32 mm
Weight (Kg)	0.51kg
Packaging (mm)	

LBS-150W-260A



LBS-150W-260P



Type	Input Wire	Output Wire	Dimming Wire & AUX Output Wire
Specifications	PVC Electronic UL1015 18AWGPVC 300V,105°C OD:2.8mm	Electronic UL1015 18AWGPVC 300V,105°C OD:2.8mm	ElectronicUL1569 22AWG 300V,105C OD:1.6mm
Color	AC-L(Black); AC-N(White) PG(Green/Yellow Green)	LED+(Red);LED-(Black)	DIM+(Purple);DIM-(Pink)
Length	300±10mm (L1)	300±10mm (L2)	300±10mm (L3)
Tinned	5±1mm (Y1)	5±1mm (Y2)	5±1mm (Y3)

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Version

DATE	DESCRIPTION	REV.	CHECK
2024.06.20	Initial version.	V1.0	