

A large graphic of a magnifying glass with a blue handle and frame, and a yellow lens. The lens contains the text "DATA SHEET" and "ES-2835-053V-XX-XXX".

DATA SHEET
ES-2835-053V-XX-XXX

SPECIFICATION

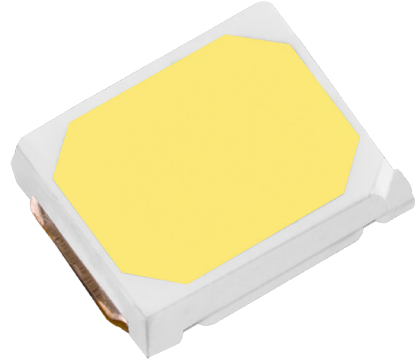
Part No : ES-2835-053V-XX-XXX
Description : 2835 LED
Version No : V1.2/01.23

ES-2835-053V-XX-XXX Datasheet



FEATURES

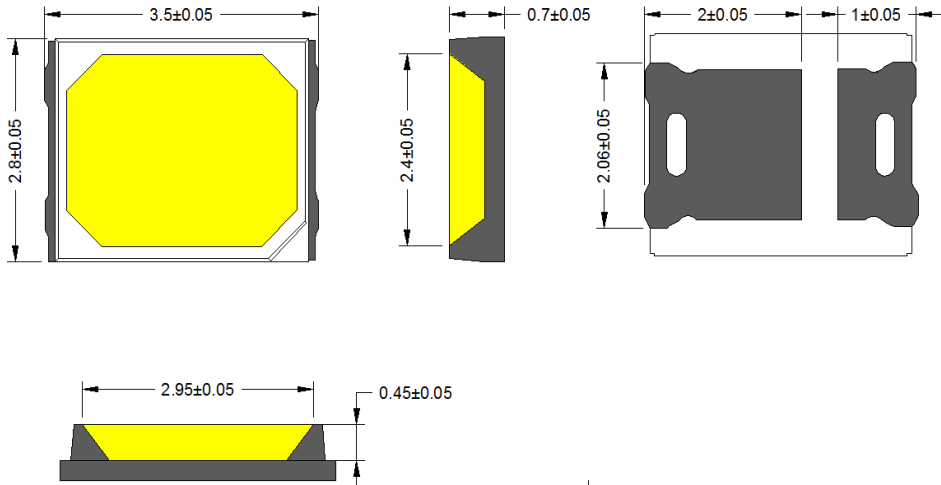
- Plcc-2 Package
- Top View White Led
- Wide Viewing Angle
- Rohs Compliant
- Package:17000pcs/reel



APPLICATION

- General lighting
- Optical indicator
- Switch Lights
- Decorative and Entertainment Lighting

Package Dimensions



Notes:

1. All dimensions in millimeters.
2. Thickness tolerance of copper plate is ± 0.02 mm.
3. Thickness tolerance of product is ± 0.05 mm.
4. Tolerance is ± 0.1 mm unless otherwise noted.

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
Forward current	I_F	150	mA
Peak Forward Current ^[1]	$I_{F(\text{Peak})}$	180	mA
Storage Temperature	T_{stg}	-40~+105	°C
Operating Temperature	T_{opr}	-30~+105	°C
Soldering Temperature	T_s	/	°C
Junction Temperature	T_j	125	°C
ESD Sensitivity	ESD	2000V HBM	V
Lead Soldering Temperature	T_{sol}	Max. 350°C for 5 sec	°C

*1) These or any other conditions beyond those indicated under recommended operating conditions may cause permanent damages to the device .

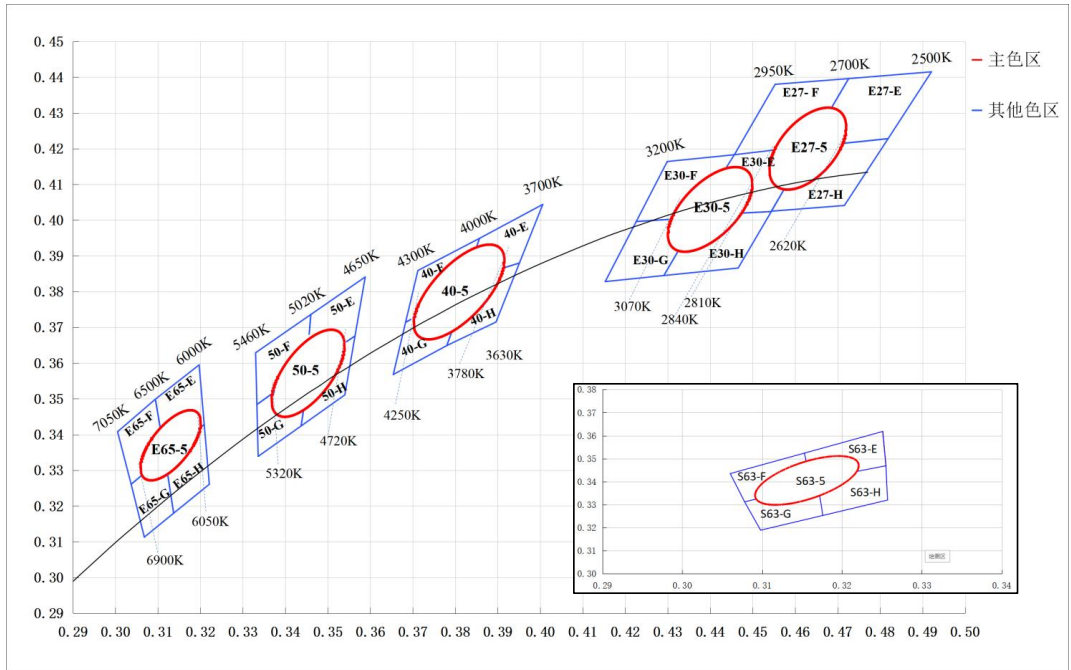
*2) D. C. Current : $T_j = T_c + R_{\text{th j-s}} \times P$; $T_j = T_c + R_{\text{th j-s}} \times P$

CHARACTERISTICS (T_j=25°C)

Items	Symbol	CCT	Min	Avg	Max	Unit
L1 Luminous Flux	Φ_v	3000	60	~	65	LM
		4000	65	~	70	LM
		5700	65	~	70	LM
		6500	65	~	70	LM
		7500	65	~	70	LM
Items	Symbol	CCT	Min	Avg	Max	Unit
L2 Luminous Flux	Φ_v	3000	65	~	70	LM
		4000	70	~	75	LM
		5700	70	~	75	LM
		6500	70	~	75	LM
		7500	70	~	75	LM
Forward Voltage	V _f	I _f =150mA	2.9	~	3.2	V
Color Rendering Index	R _a	I _f =150mA	/	--	--	--
Viewing Angle	2 θ _{1/2}	I _f =150mA	--	120	--	°
Thermal Resistance	R _{th j-s}		--	22	--	°C/W
Reverse Leakage Current	I _r	-	/	/	5	μA

*These values are measured by the GS Everfine Hass2000 optical spectrum analyzer within the following tolerances: Hass2000
Luminous Flux (Φ_v) : ±5%, Forward Voltage (V_f) : ±0.1, X/Y : ±0.005, CRI Value : ±2
±5%, ±0.1, X/Y : ±0.005, ±2

CHROMATICITY BINS



Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
E65-5	0.3130	0.3370	0.00223	0.00095	58.38	5	6200-6700K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
E65-E	0.3116	0.3338	0.3094	0.3499	0.3197	0.3595	0.3209	0.3428
E65-F	0.3037	0.3261	0.3005	0.3408	0.3094	0.3499	0.3116	0.3338
E65-G	0.3068	0.3113	0.3037	0.3261	0.3116	0.3338	0.3137	0.3180
E65-H	0.3137	0.3180	0.3116	0.3338	0.3209	0.3428	0.3221	0.3261

Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
50-5	0.3454	0.3572	0.00274	0.00118	59.62	5	4800-5200K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
50-E	0.3449	0.3581	0.3460	0.3736	0.3588	0.3841	0.3564	0.3676
50-F	0.3333	0.3484	0.3330	0.3629	0.3460	0.3736	0.3449	0.3581
50-G	0.3333	0.3484	0.3336	0.3339	0.3437	0.3424	0.3449	0.3581
50-H	0.3437	0.3424	0.3449	0.3581	0.3564	0.3676	0.3540	0.3511

Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
40-5	0.3809	0.3799	0.00313	0.00134	54.00	5	3800-4200K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
40-E	0.3818	0.3793	0.3857	0.3949	0.4006	0.4044	0.3951	0.3880
40-F	0.3683	0.3714	0.3712	0.3859	0.3857	0.3949	0.3818	0.3793
40-G	0.3654	0.3568	0.3683	0.3714	0.3818	0.3793	0.3780	0.3649
40-H	0.3780	0.3649	0.3818	0.3793	0.3951	0.3880	0.3896	0.3715

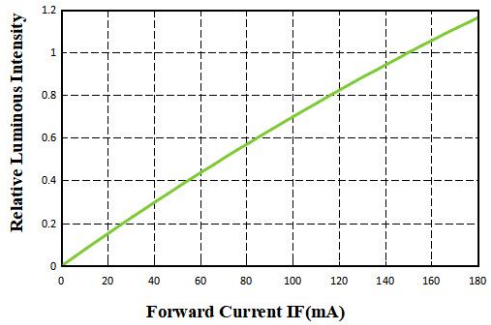
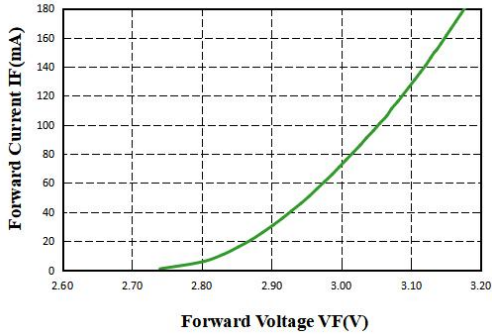
Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
E30-5	0.4400	0.4030	0.00278	0.00136	53.17	5	2850-3050K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
E30-E	0.4372	0.4009	0.4457	0.4183	0.4632	0.4205	0.4544	0.4024
E30-F	0.4226	0.3996	0.4299	0.4164	0.4457	0.4183	0.4372	0.4009
E30-G	0.4153	0.3828	0.4226	0.3996	0.4372	0.4009	0.4291	0.3845
E30-H	0.4291	0.3845	0.4372	0.4009	0.4544	0.4024	0.4466	0.3866

Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
E27-5	0.4630	0.4200	0.00258	0.00137	57.28	5	2650-2800K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
E27-E	0.4632	0.4205	0.4726	0.4396	0.4921	0.4415	0.4819	0.4228
E27-F	0.4457	0.4183	0.4553	0.438	0.4726	0.4396	0.4632	0.4205
E27-G	0.4372	0.4009	0.4457	0.4183	0.4632	0.4205	0.4544	0.4024
E27-H	0.4544	0.4025	0.4632	0.4205	0.4819	0.4228	0.4716	0.4041

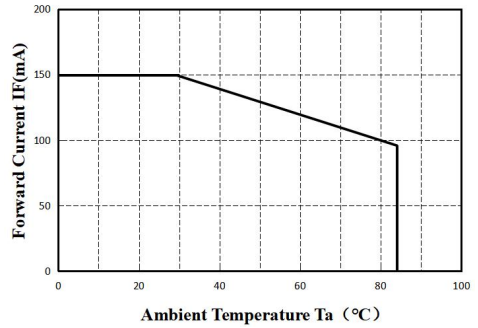
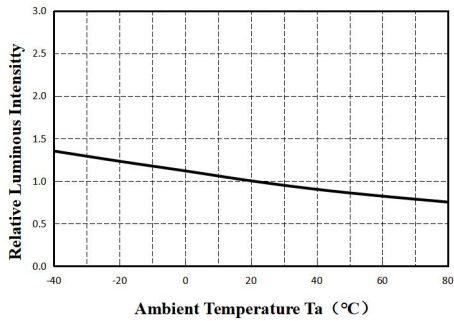
Main color BIN	x	y	a	b	θ	SDCM	Refer to CCT	
S63-5	0.3156	0.3405	0.0023	0.00095	65	5	5950-6650K	
Other color BIN	x1	y1	x2	y2	x3	y3	x4	y4
S63-E	0.3154	0.3399	0.3245	0.3479	0.3241	0.3628	0.3143	0.3534
S63-F	0.3154	0.3399	0.3143	0.3534	0.3050	0.3445	0.3068	0.3322
S63-G	0.3154	0.3399	0.3068	0.3322	0.3088	0.3199	0.3166	0.3263
S63-H	0.3154	0.3399	0.3166	0.3263	0.3247	0.3330	0.3245	0.3479

Typical Characteristic Curves

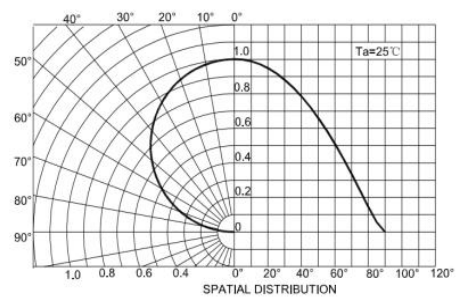
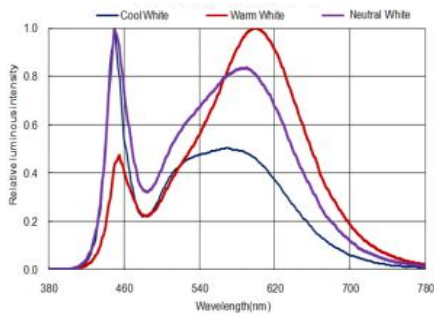
Forward Current Characteristics



Temperature Characteristics



Derating Curve



Max Driving Forward Current vs. Soldering Temp



Reliability Test Item and Conditions

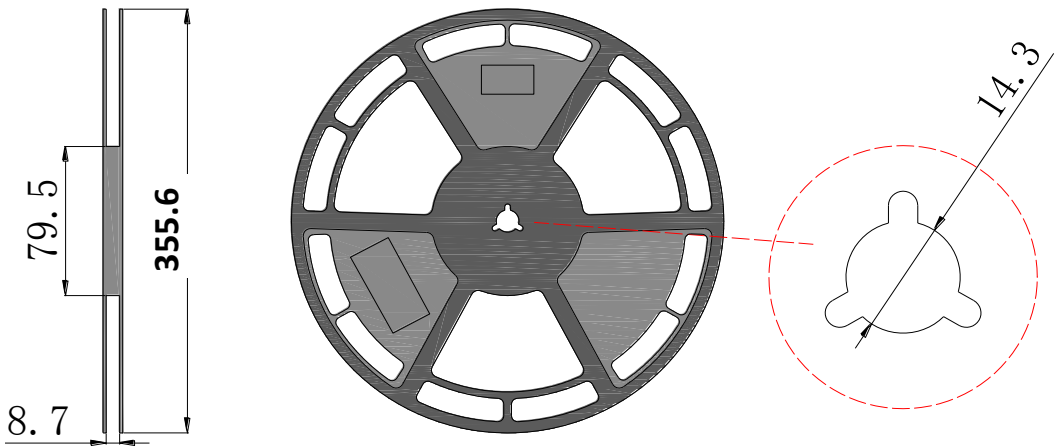
Failure Criteria

Items	Symbols	Test Conditions	Min	Max
Forward Voltage	Vf	If=Typical Current	--	Initial Value*1.1
Luminous Flux	Φ_v	If=Typical Current	Initial Value*0.7	--

Reliability Test

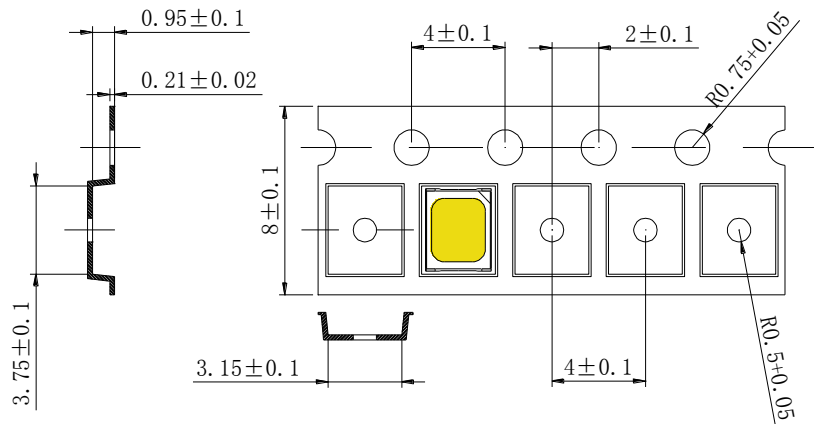
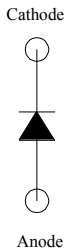
Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
Room Temperature Operating Life	Ta=25°C If=Typical Current (DC)	1000hrs	22pcs	0/1
High Temperature Operating Life	Ta=85°C If=Typical Current (DC)	1000hrs	22pcs	0/1
Wet High Temperature Operating Life	Ta=85°C&85%RH If=Typical Current (DC)	168hrs	22pcs	0/1
Low Temperature Operating Life	Ta=-30°C	1000hrs	22pcs	0/1
High Temperature Storage Life	Ta=85°C	1000hrs	22pcs	0/1
Low Temperature Storage Life	Ta=-40°C	1000hrs	22pcs	0/1
Temperature Cycle	H:+100°C 30min~ 5min~L:-40°C 30min	200cycles	22pcs	0/1
Thermal Shock	H:+100°C 15min~ 30sec~L:-40°C 15min	200cycles	22pcs	0/1
Reflow Soldering	260°C 10sec	3cycles	22pcs	0/1

Packing Standard



Reel
Tape

Polarity
Direction



Remarks:

1. The material of the reel is PS (black), and the material of the cover tape is PET (transparent)
2. The unmarked tolerance is $\pm 1.0^\circ$;
3. When the products are out of the warehouse, they are packaged with carrier tapes, put into aluminum foil bags, and vacuum-sealed with desiccant. Each carrier is packed with LEDs. The number of lamp beads is 20,000 pcs. When using, please confirm that the aluminum foil bag is not leaking and the carrier tape is not cracked.

PRECAUTION FOR USE

- (1) This device should not be used in any type of fluid such as water, oil, organic solvent, etc. When washing is required, IPA should be used.
- (2) When the LEDs are illuminating, operating current should be decided after considering the ambient maximum temperature.
- (3) LEDs must be stored to maintain a clean atmosphere. If the LEDs are stored for 3 months or more after being shipped from Everstar, a sealed container with a nitrogen atmosphere should be used for storage.
- (4) The LEDs must be used within seven days after opening the moisture proof packing. Repack unused Products with anti-moisture packing, fold to close any opening and then store in a dry place.
- (5) The appearance and specifications of the product may be modified for improvement without notice.
- (6) This LED is sensitive to the static electricity and surge. It is recommended to use a wrist Band or anti-electrostatic glove when handling the LEDs.
- (7) On manual soldering, a solder tip must be needed as grounded for usage. If over voltage which exceeds the absolute maximum rating is applied to LEDs, it will cause damage LEDs and result in destruction. Damaged LEDs will show some unusual characteristics such as leak current remarkably increase, turn-on voltage becomes lower and the LEDs get unlighted at low current.