

EdiLine III Series

The linear structure of EdiLine III Series results in an easier heat dissipation requirement, making versatile fixtures design possible as well as an overall cost saving benefit. The special twin connectors design allows EdiLine to be assembled easily with screws in either serial order as a linear light source or parallel order as a planar light source.

Features

- Linear Packaging Design
- High Efficiency
- Low Power Consumption
- Long Operating Lifespan
- Easy Installation with Screws

Typical Applications

- General lighting
- Contour lights
- Ceiling lights
- Decoration lights
- Architectural lighting

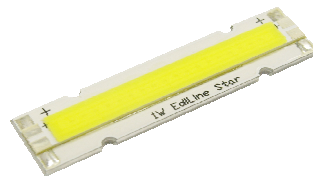


Table Of Contents

EdiLine III Nomenclature.....	2
Product dimensions	3
Absolute Maximum Ratings.....	4
Luminous Flux Characteristics ($T_J=25^{\circ}\text{C}$).....	4
Forward Voltage Characteristics ($T_J=25^{\circ}\text{C}$).....	5
Dominant Wavelength or Color Temperature Characteristics ($T_J=25^{\circ}\text{C}$).....	6
Emission Angle Characteristics ($T_J=25^{\circ}\text{C}$)	7
Typical Radiation Pattern	8
Operating life, mechanical, and environmental tests performed on EdiLine III package	9
Substrate Temperature Measurement Point.....	9
Optical Curves-Spectrum	10
Package Specifications.....	11

EdiLine III Nomenclature

EdiLine III Series



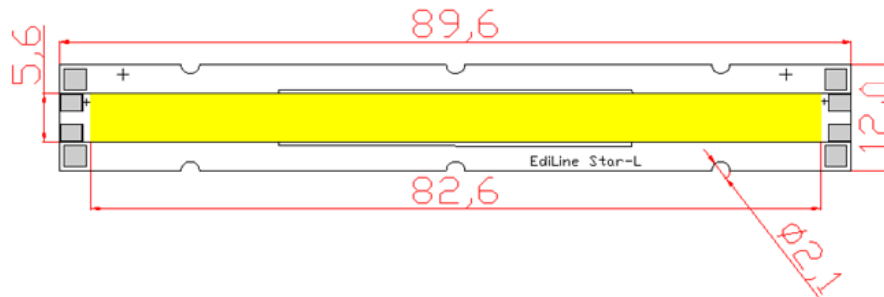
E L B W - 1 S A 0 - B 00

X1 X2 X3 X4 X5 X6 X7 X8 X9

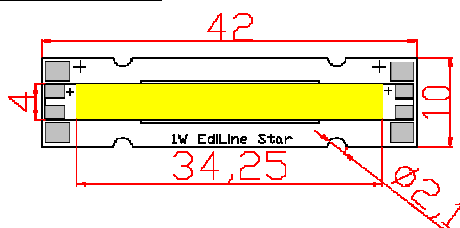
X1 LED Item		X2 Module		X3 Emitting Color		X4 Power		X5 Serial No.		X6 Circuit Type		X7-X9 Serial No.	
Code	Type	Code	Type	Code	Type	Code	Type	Code	Type	Code	Type	Code	Type
EL	EdiLine III	B	Type III-1	W	Cool White	1	1W			B	18 Parallel with 3 Serial		
		C	Type III-2	H	Neutral White	3	3.5W			C	18 Parallel with 1 Serial		
				X	Warm White								

Product dimensions

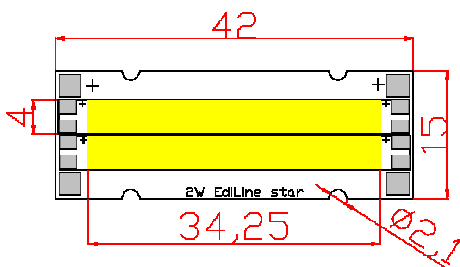
ELCx-3SB0



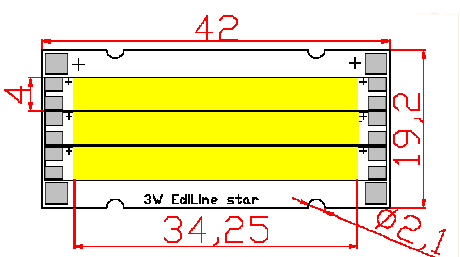
ELBx-1SC0



ELBx-2SC0



ELBx-3SC0



Notes:

1. All dimensions are in mm.
2. Al Substrate thickness is 1 mm
3. Drawings are not to scale.
4. **It is strongly recommended that the temperature of Ts be not higher than 55°C.**
(Ts: Substrate Temperature, refer to [Substrate Temperature Measurement Point at page 8](#))
5. 1SA0 and 1SC0 represent different type of emitters in use.
6. General tolerance is 0.2mm.

Absolute Maximum Ratings

Parameter		Symbol	Rating	Units
Transient Surge Voltage	ELCx-3SB0	V_{TS}	12	V
	ELBx-1SC0		5	
DC Forward Current		I_F	350	mA
LED Junction Temperature		T_J	80	°C
Operating Temperature		T_{opr}	-40 ~ +50	°C
Storage Temperature		T_{stg}	-40 ~ +120	°C
Allowable Reflow Cycles		n/a	3	cycles

Luminous Flux Characteristics ($T_J=25^\circ\text{C}$)

Part Name	Color	Test Current	Flux Typ.	Units
ELCW-3SB0	Cool White	350mA	330	lm
ELCH-3SB0	Neutral White	350mA	260	lm
ELCX-3SB0	Warm White	350mA	230	lm
ELBW-1SC0	Cool White	350mA	100	lm
ELBH-1SC0	Neutral White	350mA	80	lm
ELBX-1SC0	Warm White	350mA	70	lm
ELBW-2SC0	Cool White	700mA	200	lm
ELBH-2SC0	Neutral White	700mA	160	lm
ELBX-2SC0	Warm White	700mA	140	lm
ELBW-3SC0	Cool White	1050mA	300	lm
ELBH-3SC0	Neutral White	1050mA	240	lm
ELBX-3SC0	Warm White	1050mA	210	lm

Forward Voltage Characteristics ($T_J=25^{\circ}\text{C}$)

Part Name	Color	Test Current	V_F Typ.	Units
ELCW-3SB0	Cool White	350mA	10.2	V
ELCH-3SB0	Neutral White	350mA	10.2	V
ELCX-3SB0	Warm White	350mA	10.2	V
ELBW-1SC0	Cool White	350mA	3.4	V
ELBH-1SC0	Neutral White	350mA	3.4	V
ELBX-1SC0	Warm White	350mA	3.4	V
ELBW-2SC0	Cool White	700mA	3.4	V
ELBH-2SC0	Neutral White	700mA	3.4	V
ELBX-2SC0	Warm White	700mA	3.4	V
ELBW-3SC0	Cool White	1050mA	3.4	V
ELBH-3SC0	Neutral White	1050mA	3.4	V
ELBX-3SC0	Warm White	1050mA	3.4	V

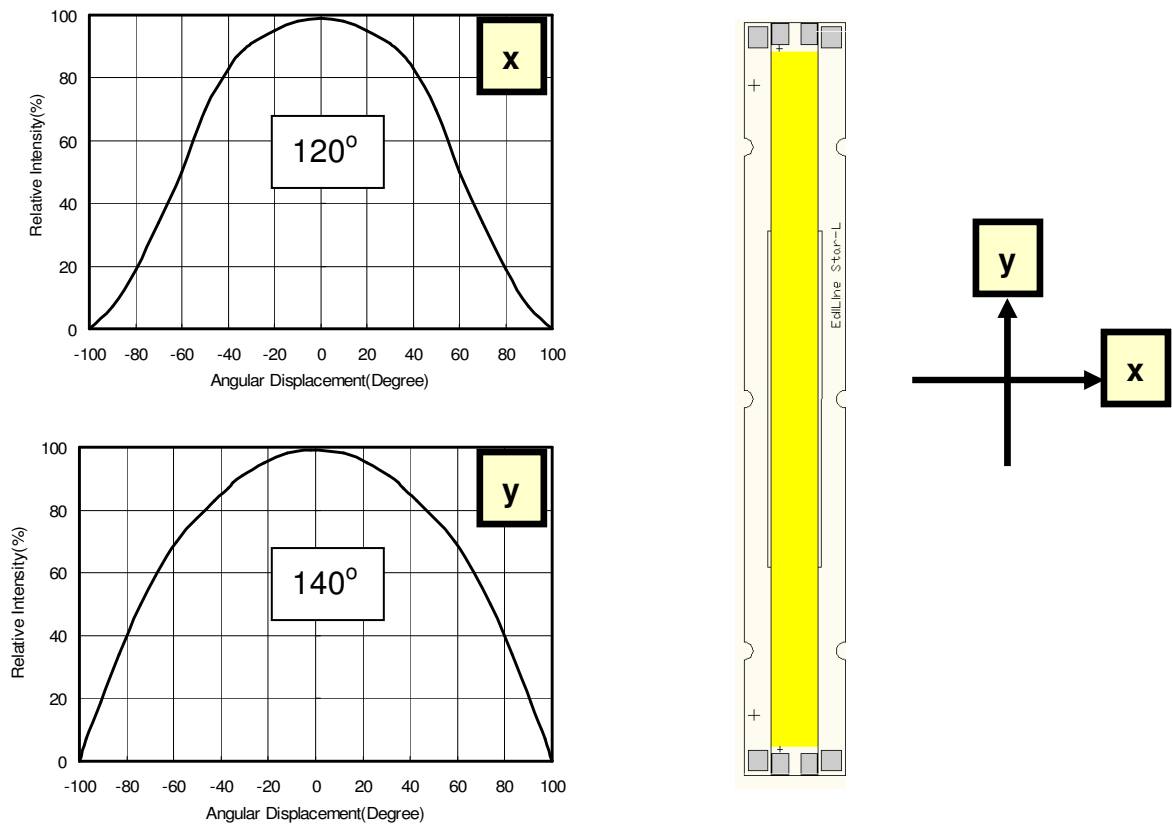
Dominant Wavelength or Color Temperature Characteristics ($T_J=25^{\circ}\text{C}$)

Part Name	Color	Test Current	λ_d/CCT		Units
			Min.	Max.	
ELCW-3SB0	Cool White	350mA	5,000	10,000	K
ELCH-3SB0	Neutral White	350mA	3,800	5,000	K
ELCX-3SB0	Warm White	350mA	2,670	3,800	K
ELBW-1SC0	Cool White	350mA	5,000	10,000	K
ELBH-1SC0	Neutral White	350mA	3,800	5,000	K
ELBX-1SC0	Warm White	350mA	2,670	3,800	K
ELBW-2SC0	Cool White	700mA	5,000	10,000	K
ELBH-2SC0	Neutral White	700mA	3,800	5,000	K
ELBX-2SC0	Warm White	700mA	2,670	3,800	K
ELBW-3SC0	Cool White	1050mA	5,000	10,000	K
ELBH-3SC0	Neutral White	1050mA	3,800	5,000	K
ELBX-3SC0	Warm White	1050mA	2,670	3,800	K

Emission Angle Characteristics ($T_J=25^{\circ}\text{C}$)

Part Name	Color	Test Current	$2\Theta^{1/2}(\text{Typ.})$ X direction	$2\Theta^{1/2}(\text{Typ.})$ Y direction	Units
ELCW-3SB0	Cool White	350mA	120	140	Degrees
ELCH-3SB0	Neutral White	350mA	120	140	Degrees
ELCX-3SB0	Warm White	350mA	120	140	Degrees
ELBW-1SC0	Cool White	350mA	120	140	Degrees
ELBH-1SC0	Neutral White	350mA	120	140	Degrees
ELBX-1SC0	Warm White	350mA	120	140	Degrees
ELBW-2SC0	Cool White	700mA	120	140	Degrees
ELBH-2SC0	Neutral White	700mA	120	140	Degrees
ELBX-2SC0	Warm White	700mA	120	140	Degrees
ELBW-3SC0	Cool White	1050mA	120	140	Degrees
ELBH-3SC0	Neutral White	1050mA	120	140	Degrees
ELBX-3SC0	Warm White	1050mA	120	140	Degrees

Typical Radiation Pattern



Notes

1. Flux is measured with an accuracy of $\pm 10\%$.
2. CCT selection acc. to CCT groups and an accuracy of $\pm 300K$
3. Forward Voltage is measured with an accuracy of $\pm 0.2V$
4. Wavelength is measured with an accuracy of $\pm 1nm$
5. Cool White 、 Neutral White 、 Warm White emitters are built with InGaN

Operating life, mechanical, and environmental tests performed on EdiLine III package

Stress Test	Stress Conditions	Stress Duration	Failure Criteria
Room Temperature Operating Life	25°C, I _F = max DC (Note 1)	1,000 hours	Note 2
High Temperature High Humidity	85°C / 85%RH	1,000 hours	Note 2
Thermal Shock	-40 / 120°C, 20 min dwell < 10 sec transfer	600 cycles	No catastrophic
Low Temperature Storage Life	-40°C	1,000 hours	Note 2

Notes:

Failure Criteria:

Electrical failures

VF shift \geq 10%

Light Output Degradation

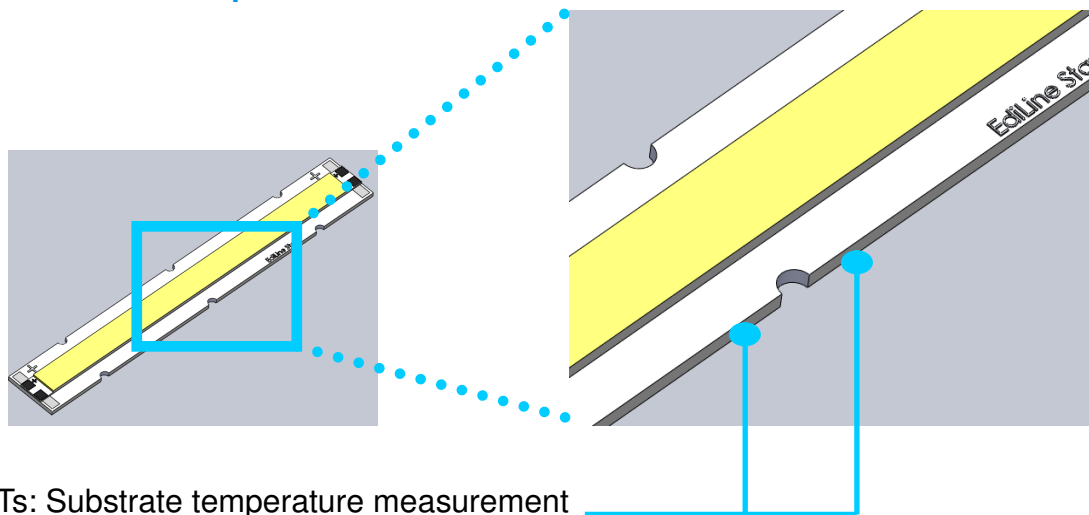
% Iv shift \geq 30% @1,000hrs

Visual failures

Broken or damaged package

Dimension out of tolerance

Substrate Temperature Measurement Point



Ts: Substrate temperature measurement

Note:

1. It strongly recommend to check the temperature of Ts be below 55°C while thermal design.
2. For thermal design advice, please refer to [EdiLine III series Lighting Application Guide](#).

Optical Curves-Spectrum

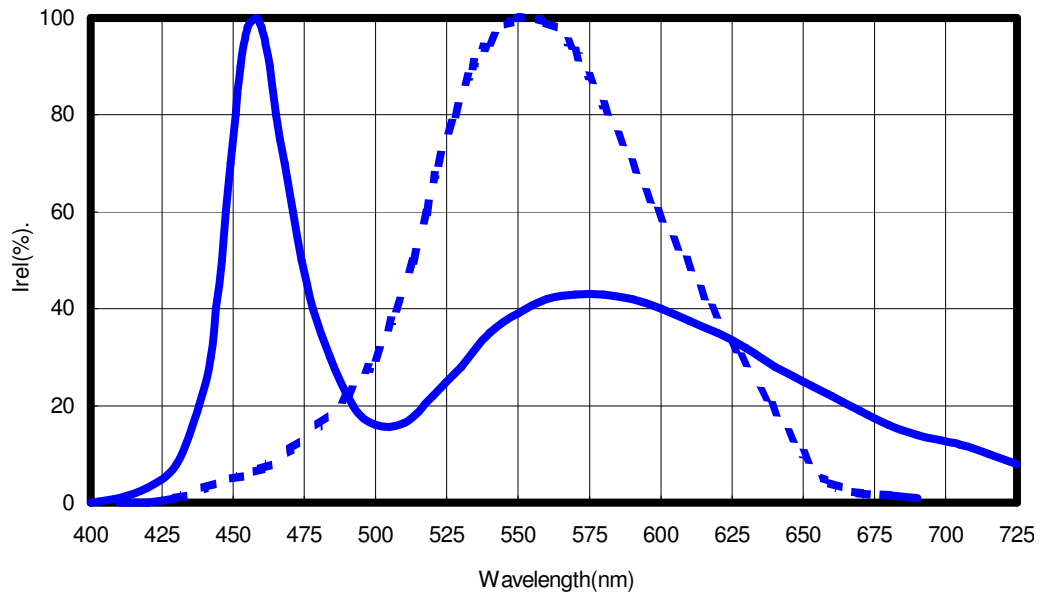


Figure 1. White color spectrum of typical CCT, standard eyes response to dotted curve line and CRI \approx 70 at $T_J=25^\circ\text{C}$.

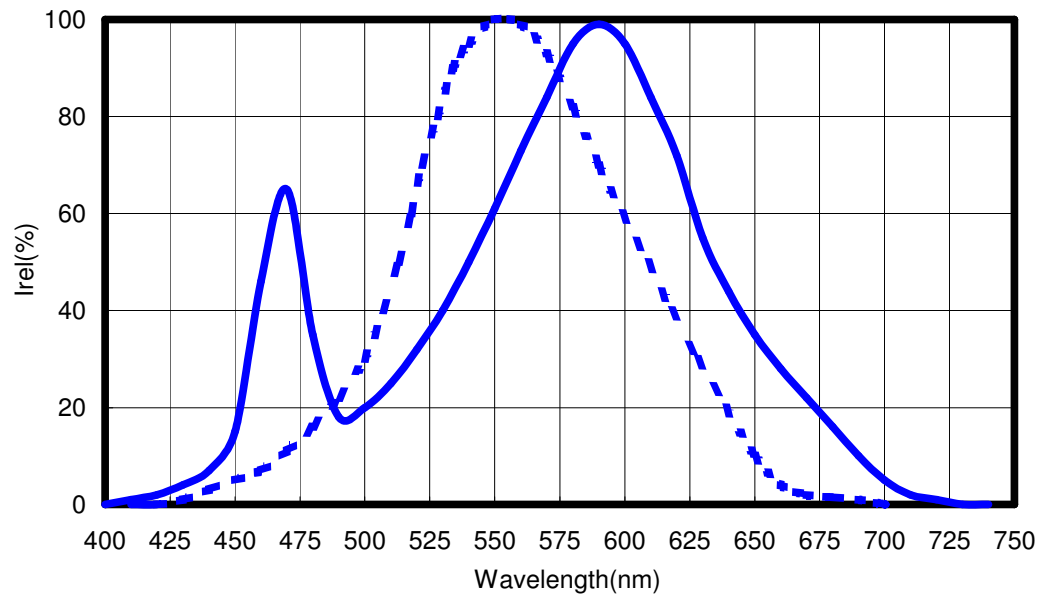
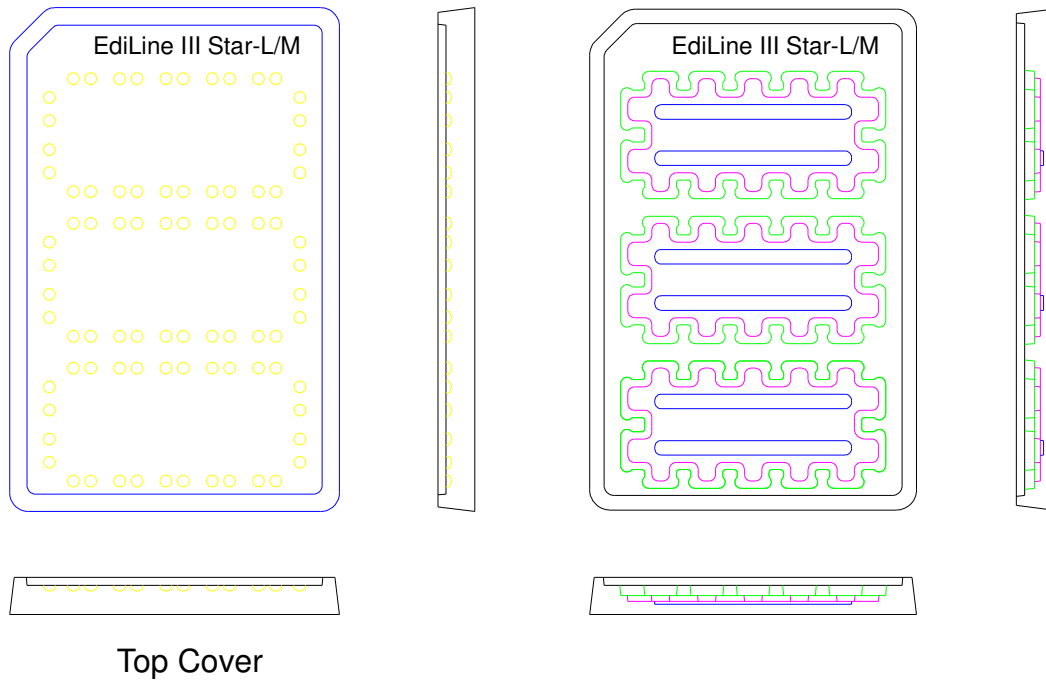


Figure 2. Warm white color spectrum of typical CCT, standard eyes response to dotted curve line and CRI \approx 80 at $T_J=25^\circ\text{C}$.

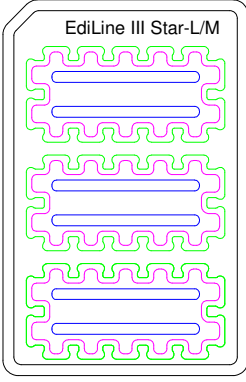
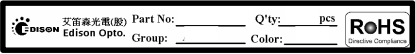
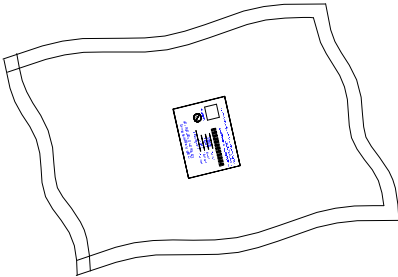

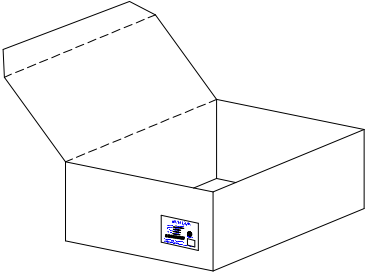

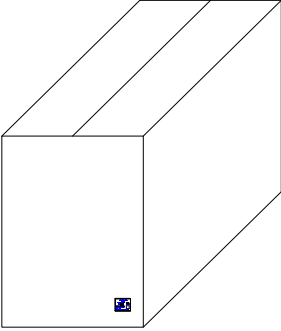

Package Specifications



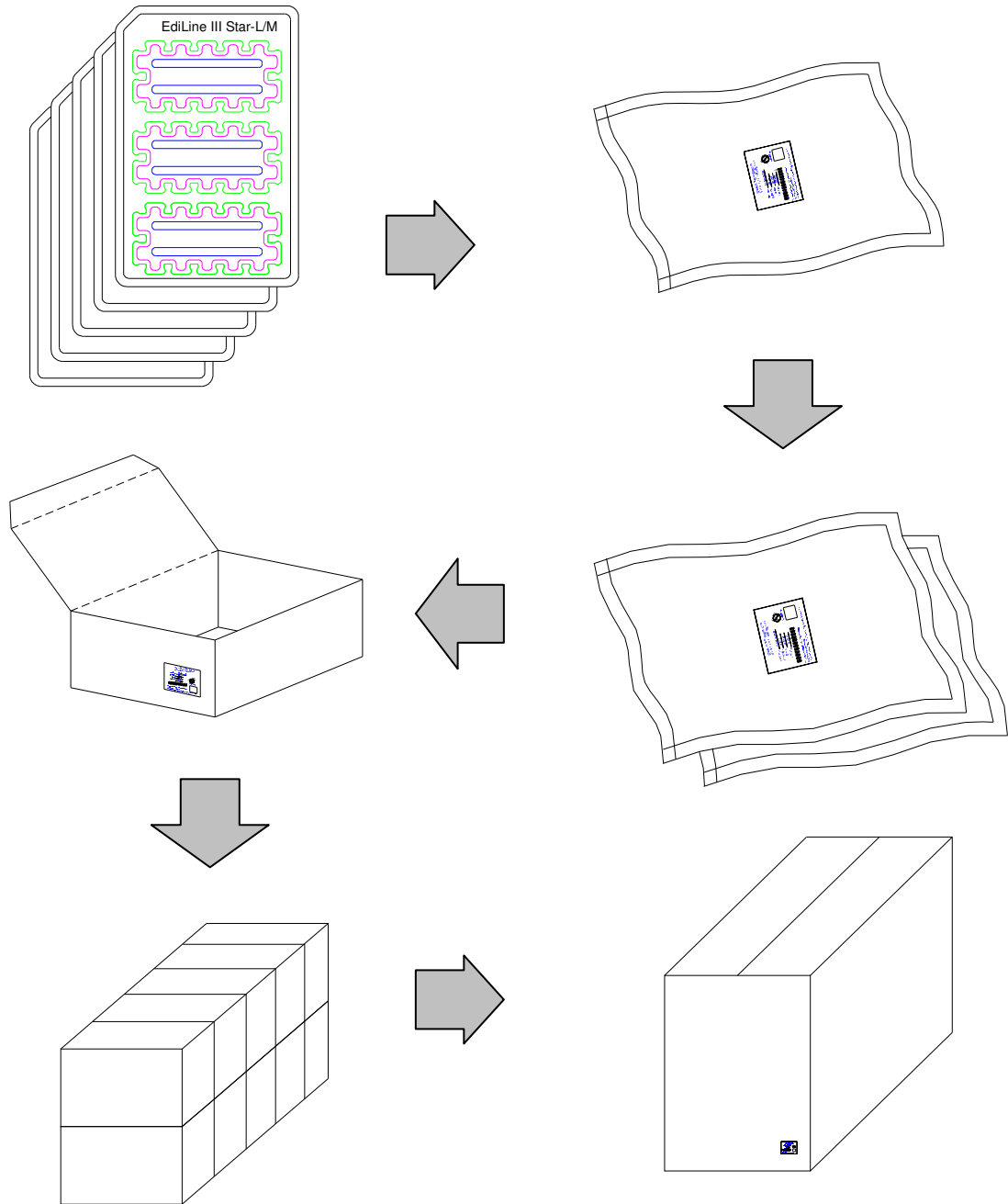
Notes

1. Inner antistatic bag standard.
2. There are 6pcs EdiLine-L, 15pcs EdiLine-M emitters per tray.
3. 5 trays per bag.
4. 2 bags per box.
- 5.

Label explanation

Level	Sign	Label
<p>Tray Label</p>		
<p>ESD Shielding Bag Label</p>		
<p>Inner Box Label</p>		
<p>Outer Box Label</p>		

Package Step



Packaging Information

Item	Emitter	Quantity	Total	Dimensions(L * W * H)
Tray	1W	15 pcs/tray	15 pcs	174*114*12.8 mm
	3.5W	6 pcs/tray	6 pcs	
ESD Shielding Bag	1W	5 trays/bag	45 pcs	200*330*0.1 mm
	3.5W		30 pcs	
Inner Box	1W	2 bags/box	90 pcs	240*170*95 mm
	3.5W		60 pcs	
Outer Box	1W	10 inner boxes/outer box	900 pcs	488*260*36.4 mm
	3.5W		600 pcs	