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### SAMSUNG

### **LED Module**

Document No. P7V2F385BKI-0.1

DATE OF ISSUE : June 03, 2015

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### **REVISION HISTORY OF SPECIFICATION**

REV. NUM	REVISION	PAGE	DATE	TRACED	APPROVED
0.0	The Preliminary specification established.	1~9	2015.05.12	_	S.A. Joo
0.1	The First Specification Established	1~9	2015.06.03	-	S.A. Joo

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This is a product specification of SL-P7V2F385BKI, one or Please refer to relevant General and Special Application N mechanical design and reliability information.			electrical,

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#### **1. APPLICATION**

25W Platform LED Module is designed as a core component in Modular Platform Engine Series for street light and flood light application. This document especially specifies 25W Platform LED Module with Fin, generally recommended for luminaires with insufficient thermal management by the fixture itself.

#### 1-1 Modular Platform Modules.

There are three different types of heat sink designs for 25W Platform LED Module, intended for thermal management either by engine or by fixture.

This document especially specifies 25W Platform LED Module without Fin for thermal management by Fixtures.



(a) Module with Fin [Thermal management by Module/Engine]



(b) Module without Fin [Thermal management by Fixture]

#### 1-2 Modular Platform Engine Series

Typical operating current for one module is set at 700mA, which allows lumen output increment by **2000lm(nominal value)** depending on the number of LED modules.

#### 1-2-1 Lumen Packages with LED Driver

Power Consumption (Engine, Nominal)	Modules (ea)	Driver Output Channels (ea)	Operating Current (mA)	Lumen Output (Im)
25W	1	1	700	2000
50W	2	1	700	4000
75W	3	1	700	6000
100W	4	2	700	8000
150W	6	2	700	12000

\* This Module is recommended using a Isolated PSU.

#### 1-2-2 Current Distribution across Modules

Current per module can vary depending on the Vf distribution of modules in parallel, deviating from the nominal operating current(700mA). The Vf distribution of modules is tightly controlled to achieve uniform driving currents.

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#### 1-2-3 Optic Solutions

Application	Light Distribution	Solutions	Material
	IESNA Type I	Medium(1)	PC
	IESNA Type II	Short(1), Medium(1), Medium(2)	PC
Street Light	IESNA Type III	Medium(1)	PC
	IESNA Type IV	Medium(1)	PC
	IESNA Type V	Short(1)	PC
Flood Light	Medium	Batwing (BA85)	PC

\* BA : Beam Angle, PC : Polycarbonate

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	INDAMENTAL S	PECIFICA	TIONS				0		
No.	ARTICLE								<b>5</b> % )
	Photometric Speci	ticle	Symbol		Ddule @	2700mA( MAX	Stabiliz Unit	ed at Ic~6 Equipm	
		ous Flux	LF	1950	2100	IVIAA	Im	Goniometer	
		mperature	CCT	2870	3000	3220		Integrating	
		lering Index		70		5220		Integrating	-
	* Typical values	5		_	as the	nominal		5 5	opricie
2-1	<ul> <li>Measurement t and the measure</li> <li>Light Distribution</li> <li>Gamma Arges</li> <li>105</li> <li>105</li></ul>	Profile : Be	re of the	e 85 deg	e height	is $\pm 0.00$ h <b>Optimi</b>		8.0m 8.0m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	niformit
2-2	Dimension		,						
		· LED Lig			. ,	· ,	. ,		
2-3	Weight		-	-	-	•		).6kg/1box	
2-4	Operating Temperature	descri		Tc poin	ts as a	Tc point function		nber of moc shik.	lules are
2-5	Storage Temperature	•-30℃~ ※ Ambie	+70℃ (T ent tempe	,	ithout o	peration			
2-6	Dust-proof Water-proof	• IP66 for							

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No.				_						
	ARTICLE			S	PECIFI	CATIO	NS			
	Electrical Specification	on of Plat	form LE	ED Modu	ule (stal	oilized	at Tc~65℃)			
	Article	Symbol	MIN	TYP	MAX	Unit	Remarks			
	Power Consumption	Р	-	21	25	W	30V x 0.7A, module only			
	Operating Current	lop	-	700	700	mA	per 1 Module [700mA /PKG 1EA,TYP.]			
	Operating Voltage	Vdc	26.0	30	33.0	V	per 1 Module [3.0V/PKG 1EA, TYP.] 10 LEDs in Series			
	Type Classification	∙ Built−in	module							
2-7	Eye Protection	• Risk G	roup 2							
	Working Voltage for Insulation	• 50V								
	The power consumption for a specific module is dependent on the operating volta distribution across the modules in parallel connection. The maximum operating cu means the highest limit in any operating condition.						on the operating voltage maximum operating current			
	<ul> <li>Typical and Maximum Operating Current may have ±5% Tolerance</li> </ul>									
	<ul> <li>Voltage difference between modules are tightly controlled to be less than 1.0V so that the maximum current of any module can be limited to 700mA. Voltage bins of modules will be designated on the module label and box label.</li> </ul>									
	* Safety and wiring information will be described in Electrical Application Notes.									
		monnation	will be	describe	ed in El	ectrical	Application Notes.			
	, ,	ers to atta	ch the s	surge pro	otector t	o a PS	SU or to use a PSU that			
3. PA	* We recommend us	ers to atta tect circuit	ch the s	surge pro	otector t	o a PS	SU or to use a PSU that			
3. PA No.	* We recommend us equipped surge pro	ers to atta tect circuit	ch the s	surge pro	otector t	o a PS atmosp	SU or to use a PSU that here condition.			
	* We recommend us equipped surge pro	ers to atta tect circuit ONS • Material	ch the s t suitable	surge pro e for the	otector t user's SPECIF el with	o a PS atmosp ICATIC	SU or to use a PSU that here condition.			
No.	* We recommend us equipped surge pro ARTS SPECIFICATI ARTICLE Lens Cover	ers to atta tect circuit ONS • Material • Locatior • Material • Thickne • Lens Ty • UL-94 f	ch the s suitable l : Stain n : betw l : Polyc ss : 2.0 /pe : Be Flammat	surge pro- e for the less Ste reen the carbonate mm eam Ang poility : V-	SPECIF el with array le el 85 de	o a PS atmosp ICATIC Teflon N ens and	SU or to use a PSU that here condition.			
No. 3-1	* We recommend us equipped surge pro ARTS SPECIFICATI ARTICLE Lens Cover Screw	ers to atta tect circuit ONS • Material • Locatior • Material • Thickne • Lens Ty • UL-94 f	ch the s t suitable l : Stain n : betw l : Polyc ss : 2.0 /pe : Be Flammat ctive Equ	surge pro- e for the less Ste reen the carbonate mm eam Ang polity : V-	SPECIF el with <sup>-</sup> array le e le 85 de 2 n Lumina	o a PS atmosp ICATIC Teflon N ens and	SU or to use a PSU that here condition.			
No. 3-1 3-2	<ul> <li>We recommend us equipped surge pro</li> <li>ARTS SPECIFICATI</li> <li>ARTICLE</li> <li>Lens Cover</li> <li>Screw</li> </ul>	ers to atta tect circuit <b>ONS</b> • Material • Location • Material • Thickne • Lens Ty • UL-94 F * Prote • Material	ch the s suitable l : Stain n : betw l : Polyc ss : 2.0 /pe : Be Flammat ctive Equ l : Molde Ceramic l : MCP ss : 1.6	surge pro- e for the less Ste een the carbonat	spector t a user's spector el with array le array le b le 85 de c c Lumina me c T 300 minum	o a PS atmosp ICATIC Teflon N ens and egree ries nee	SU or to use a PSU that here condition.			
No. 3-1 3-2 3-3	<ul> <li>* We recommend us equipped surge pro</li> <li>ARTS SPECIFICATI ARTICLE Lens Cover Screw</li> <li>Array Lens Cover</li> <li>Seal Rubber</li> </ul>	ers to atta tect circuit <b>ONS</b> • Material • Location • Material • Thickne • Lens Ty • UL-94 F * Prote • Material • LED : ( • Material • LED : (	ch the s suitable suitable suitable suitable standari s Stain s Steel s Steel s Steel s Steel s Steel s Steel	surge pro- e for the less Ste eeen the carbonate mm eam Ang bility : V- uipment in ed Silico PKG, C CB, Alur Screws ed PVC G, 105 °C	spector t a user's specific el with array le a le 85 de 2 n Lumina ine cT 300 ninum : 3ea coated	o a PS atmosp ICATIC Teflon \ ens and egree ries nee 0K, CR	DNS Washer I heat sink			

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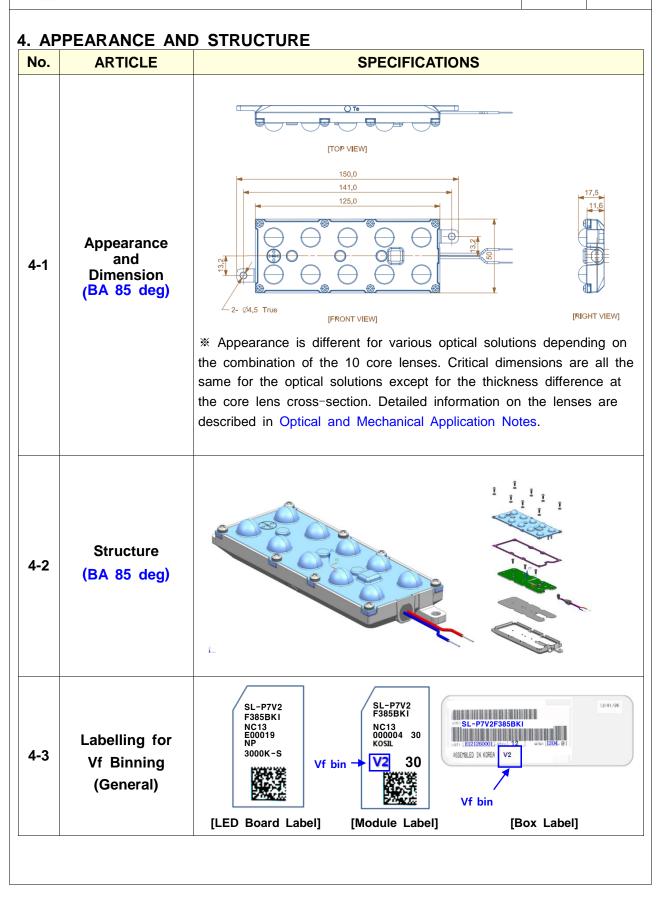
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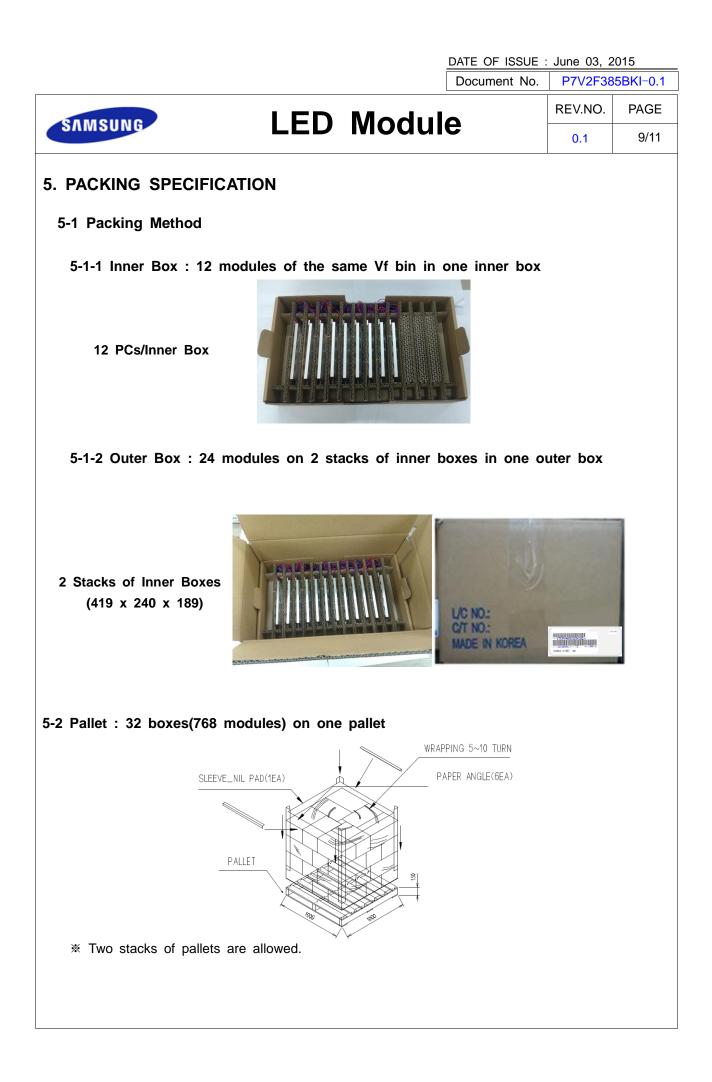
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6. LABEL Struc	ture			
6-1 LED Board L	abel () SL-P7V2 F385BKI NC13 E00019 () S () S () S () S () S () S () S () S () S () () () () () () () () () ()	2 • • • •		
Number	Item	Description	I	
1	Model Number (Product Code)	-		
2	SMT Date Code	year: A:00, B:01,H:07, I:08, month: 1,2,3,45,6,7,8,9,A,B,C day:01,02,03,04,05,31		
3	SMT Line	-		
(4)	Serial Number	00001 ~ 99999		
5	LED Binning Code	-		
6	ССТ			
	001	3000K / 4000 K / 500	00 K	
7	LED Maker	3000K / 4000 K / 500 S: Samsung	00 K	
	LED Maker	2 30	00 K	
Ũ	LED Maker 1 (1) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	2 30		
⑦         6-2 Module Label	LED Maker 1 1 1 1 1 1 1 1 1 1 1 1 1	S: Samsung		
© 6-2 Module Label	LED Maker	S: Samsung		
© 6-2 Module Label Number	LED Maker	S: Samsung	n	
Image: The second se	LED Maker	S: Samsung	n	
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6-3 Outer Box Lab	1 DVC: SL-P7V2F385BK 2 LOT: E151115480 QTV: 12 3 ASSEMBLED IN KOREA (4)			
Number	<b>Item</b> Model Number (Product Code)	Description	I	
2	Lot No.	Factory Code (2) + Production Date	(4) + Serial No.	(4)
3	Country of Origin	KOREA		
4	Packing Quantity	24 рс		
5	Production Date (year/week#)	ууww		
6	Label Printing Date (year/month/date)	yy/mm/dd		

>>Samsung Semiconductor(三星半导体)