





Acrich3

Acrich3, Simplify your Smart Lighting System

Seoul Semiconductor proudly presents Acrich3 with advanced dimming and connections for your smart-lighting dreams.

With the ability to power IR sensors and Bluetooth controllers, the new advanced Acrich3 IC enables easy integration for your Smart-Lighting electronics. Acrich3 IC also incorporates an analog input for linear dimming based on your smart-lighting's 0-10 V command.

In addition, Acrich3 improves TRIAC Dimming compatibility. Acrich3's ability to precisely control the dimming range with a turn of knob or slide of the switch ensures smooth light control. as always, Acrich3 continues to lead the world in low-distortion power by having one of the lowest THDs and one of the highest power factors.

Remarkably Improved TRIAC Dimming Compatibility

- Easy to build Smart Lighting interface
- Wireless Control (Wi-Fi and Bluetooth)
- Smart Sensing (IR, Motion Sensors)
- Analog Dimming
- Step Dimming
- CCT Control
- Cost Efficient Dimming System compared to Conventional LED system

• Acrich3 enables Simple and Compact Smart Lighting Module

Conventional Lighting Module

• AC/DC Converter • Separate Dimming Interface

Acrich3 Smart Lighting

- Compact Design
- Save Space and Components by
- 6 mm x 6 mm Acrich IC
- · Easy Dimming Interface

• Uniform Linear Analog Dimming

Analog dimming is more important for commercial and industrial lighting
Acrich3 performs uniform linear analog dimming

More Energy Saving with Smart Lighting by Sensors

• Energy Saving with Motion Sensor Lights on 100% in the presence of people and dims to 10-50% in the absence.

• Acrich3 power sensors directly from IC Sensor modules can save component and space. LED, IC and IR sensors, and others are all on one board

• Acrich3 enables various Wireless Controls

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- Wi-Fi and Bluetooth

Power Size		Size	Shape	Vac	Efficacy	Flux	Color	CRI			Fuction					
Application	w	mm	-	V	lm/W	lm	-	-	OTP	PWM	P.Comp	TRIAC Dimmable				
Eluch Mount	13	78			90	1,170	Warm	80, 90	0			0				
Flush Mount	17	100			90	1,530	Cool	80, 90	0			0				
Track Light	5	50]		80	400	C000:	80	0			0				
Down Light	20	70	Round		100	2,000	IRD	80, 90	0		0					
	95	150							100	9,500		70				
High Bay	80	230	1	120	110	8,800		70	0		0					
	105	145	1	120	120	12,600		70	0		0					
Parking Light	16	120 x 90		220	100	1,600		80	0	0	0					
	25	70 x 220	1		120	2400		70	0	0	0					
Ctreatlight	30	70 x 260	Squre		112	2800	Cool	70	0	0	0					
Street Light	40	100 x 180	1		120	3600		70	0	0	0					
	60	100 x 210	1		112	4500		70	0	0	0					
T ((24	A : 570		1	115	2,760		80	0		0					
Irotter	24	B · 550	Linear	277	115	2,760		80	0							

• Flush Mount / Down Light

Track Light

• High Bay

Street Light Module

Get Plugged in with Acrich2

"The latest Acrich2 17 W module saves energy up to 50 percent and improves compatibility with phase cut dimmer and analog DC dimmer"

Features & Solutions

Acrich2 is a revolutionary family of LED modules for easy transition from conventional light sources to solid-state lighting (LEDs). These modules do not require the conventional drivers associated with conventional light sources.

The Acrich2 modules are the perfect replacement light sources for flush-mount fixtures, down lights, and sconces.

Applications

Downlight	• PAR	•GU10
Flush Mount	• MR16	
Wall Sconce	• A19 Bulb	

New Product 30W Street Light Module

Product Brief

Acrich 30W Street Light Module is comprised of Acrich MJT 5050 series LED, Acrich3 IC technology, and an innovative heat sink and secondary optics. The Acrich Module can be operated directly from the AC mains which simplify designs, reduce component count, and improve on the reliability of luminaire.

Features

- Compact size and weight
- 200(W) x 80(L) x 38.5(H)
- About 700g
- Decrease of payback period
- Able to use enough surge protection devices

Key Applications

- High-bay / Low-bay
- Security light

- Street light
- Tunnel light

Parameter	Unit	Value					
Falaneter	Unit	Min.	Тур.	Max.			
Luminous Flux	lm	2,900	3,100	-			
CCT	K	4,700	5,000	5,300			
CRI	-	70	-	-			
Input Valtage	Vac	120					
input voltage	Vac	220					
Power Consumption	W	27	30	33			
Operating Frequency	Hz	50 / 60					
Power Factor	-		Over 0.97				
Tolerance of Surge	V	1 000					

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	▲ SN	/JQ-1	33NF	-NS/	4

Street light	

	Deuren	V	COT	Dinning	Flux	Fl	ux	CDI	Power	
Part No.	Fower	۷F	CCT	ышту	Bin	Min.	Тур.	CRI	Factor	
	W	V	K	-	-	lr	n	-	-	
CMIE			4,700-6,000		10	200	220			
2V04W1P3		120	3,700-4,200		4a / h	270	230	Min.80	Min.0.95	
200400183	/ 5		2,600-3,200	MacAdam	40	360	400			
SMJE- 3V0/W1P3	4.5		4,700-6,000	3-Step	1.2	200	220	Min.80		
		220	3,700-4,200		4a /h	270	200		Min.0.95	
300400153			2,600-3,200		40	300	400			
CMIE			4,700-6,000		00	500	450			
		120	3,700-4,200		0d 0L	370	000	Min.80	Min.0.95	
2008001P3	0.7		2,600-3,200	MacAdam	as	/40	800			
CMIE	0.7		4,700-6,000	3-Step	0.0	500	450			
		220	3,700-4,200		0d 0L	590 740	800	Min.80	Min.0.95	
300000183			2,600-3,200		dg					
CMUD			4,700-5,300		106	1 250	1.250			
	3	120	3,700-4,200	10b(H, G, E)	100	1,250	1,300	Min.80	Min.0.97	
HE2V10W3			2,600-3,200		TUC	1,100	1,200			
SMJD-		10		4,700-5,300	10c (c)	106	1 250	1 250		
		220	3,700-4,200		100	1,200	1,300	Min.80	Min.0.97	
			2,600-3,200		TUC	1,100	1,200			
CMID			4,700-6,000		10-	000	1 000			
		120	3,700-4,200		138	3a 880	1,000	Min.80	Min.0.97	
201200203			2,600-3,200	MacAdam	130	1,140				
CMID	1		4,700-6,000	3-Step	120	000	1,000	Min.80	Min.0.97	
		220	3,700-4,200]	104	000				
311200283			2,600-3,200		130	1,140	1,210			
CMIE			4,700-6,000		12-	000	1 000			
		120	3,700-4,200		100	000	1,000	Min.80	Min.0.95	
ZVIZVVIP3	10		2,600-3,200	MacAdam	130	1,140	1,210			
CMUE	13		4,700-6,000	3-Step	10-	000	1 000			
21/12/11/2		220	3,700-4,200		100	000	1,000	Min.80	Min.0.95	
3V12W1P3			2,600-3,200		130	1,140	1,210			
CNUE			4,700-6,000		10-	000	1 000			
		120	3,700-4,200		104	000	1,000	Min.80	Min.0.97	
ZVIZWZP3			2,600-3,200	MacAdam	130	1,140	1,210			
CMIE	1		4,700-6,000	3-Step	12-	000	1 000			
2//12///2022		220	3,700-4,200		104	1 1 / 0	1,000	Min.80	Min.0.97	
3V12W2P3			2,600-3,200		IJD	1,140	1,210			

8.7 W

(Ø46 mm)

4.3 W (Ø33 mm)

10 W (Ø100 mm)

13 W (Ø50 mm)

Electro Optical Characteristics

	Powor	V	ССТ	Binning	Elux Bin	Fl	ux	CPI	Power
Part No.		*F		Dining		Min. Typ.		CIXI	Factor
	W	V	K	-	-	lı	n	-	-
SMID			4,700-6,000	-	175	1 1/0	1 200		
2V16W1P3		120	3,700-4,200		17a 17b	1,480	1,590	Min.80	Min.0.95
			2,600-3,200						
			4,700-6,000	MacAdam				Min.80	
SMJD- 3V16W1P3		220	3,700-4,200		17a 17b	1,140 1 480	1,300 1,590		Min.0.95
011011110	4.7		2,600-3,200			1,100			
	- 1/		4,700-6,000	3-Step			1,300 1,590	Min.80	
SMJD- 2V16W2P3		120	3,700-4,200		17a 17b	1,140 1,480			Min.0.95
2 10 10 12 1 5			2,600-3,200			1,400			
SMJD- 3V16W2P3			4,700-6,000	-					Min.0.95
		220	3,700-4,200		17a 17b	1,140 1,480	1,300 1.590	Min.80	
			2,600-3,200		175	1,400	1,070		
SMJC-		100	4,700-6,000	_	AL 1	500	(70	Min 00	Min.0.97
2V08W2P4*		120	2,600-3,200		ALL	580	670	MIN.80	
SMJC-		220	4,700-6,000			500	/70	Min 00	Min 0.07
3V08W2P4*	0.7	ZZU	2,600-3,200		ALL	580	670	MIN.80	MIN.U.97
SMJE-	0./	100	4,700-6,000			E (0	(70	Min 00	Min 0.07
2V08W2P4**		1ZU	2,600-3,200		ALL	540	670	Min.80	MIN.U.9/
SMJE-		000	4,700-6,000			E (0	(50	N. 00	NI: 0.07
3V08W2P4**		220	2,600-3,200		ALL	540	670	Min.80	Min.U.97
SMJE-		100	4,700-6,000			050	000		N: 0.07
2V12W2P4**	10 7	120	2,600-3,200	MacAdam		850	850 930	Min.80	Min.0.97
SMJE-	12.7	220	4,700-6,000	3-Step	ALL	050			NI: 0.07
3V12W2P4**			2,600-3,200			850	930	Min.80	Min.U.97

*Candle / **Eco (Acrich MJT 3528 used)

8.7 W candle

(Ø30 mm)

17 W

(Ø100 mm)

8.7 W Eco 12.7 W Eco (35.9x25.3 mm²) (36.5x34 mm²)

That's what we have accomplished so far.

has been started from Acrich.

17 W (Ø70 mm)

MJT stands for Multi Junction Technology, eliminating the use of multiple wire bonds among several dies. Since it uses only one chip, it vastly improves the reliability of LED package, reducing the potential number of failure modes associated with wire bonds within the LED package. It can be driven at higher voltage than Conventional DC LEDs are, providing designers high voltage options without large form factors of multi-die chip-on-boards.

Why Acrich MJT?

MJT Feature	Benefit
High Reliability	Eliminates multiple wire bonds among several dies to create the high voltage architecture improving reliability of the LED package
High Efficiency; Low Cost	Low current high voltage architecture enables simpler, smaller, cheaper, and more efficient driver topologies in luminaire designs.
Better Thermal Management	Improved efficiency of the driver electronics results in less heat generated and fewer electronic components used in the driver design allowing more space for thermal management within the luminaire
Scalability	Various package sizes possible for different lumen outputs, forward voltages, and power consumption

Electro Optical Characteristics

	Sorios Dart N		Cizo	Color	V _F	I _F	Flux	CCT	CRI	2 01/2
	Series	Fait NO.	Size	COLOI	V	mA	lm	K	-	0
	Acrich M IT			Cool						
		SAW8FS72A	2.5x2.5x2.2	Neutral	23	40	105	2,600-7,000	Min.80	130
	2020			Warm						
NE	Acrich M IT			Cool			109	4,700-7,000		
	2020	SAW8C72A	3.0x3.0x0.65	Neutral	22.5	40	106	3,700-4,700	Min.80	120
	3030			Warm			103	2,600-3,700		
	Acrich MJT	C A\A/0\A/A 2 A	2 5, 2 0, 0 /	Cool	32.5	/0	132	3,700~7,000	Min 00	120
	3528	SAWOWAZA	3.3X2.6X0.0	Warm		40	124	2,600-3,700	14111.00	120
	Acrich MJT	SAW09A0A	(0 (0	0	31	40	170	4,200-6,500	Min 70	100
	4040	SAW09H0A	4.0X4.0XZ.Z	COOL	64	20	165	4,200-6,000	MIN.70	120
NE	Acrich MJT	SAW8LH0A		Warm		20	155	2,600-3,700	Min.80	100
	5050	5050 SAWOLHOA 5.0x		Cool 64		+ 20	180	4,700-7,000	Min.70	IZU
	A suist MAIT	CANALONOOD		Warm		20	49	2,600-3,700	Min 00	
	ACTICN MUT	SAW&KGUB	5.6x3.0x0.75	Cool	22	20	53	3,700-7,000	MIN.80	115
	5630	SAW9KG0B		Warm	22	20	45	2,600-3,700	Min.90	

New Product Acrich MJT 3030

Product Brief

Acrich MJT 3030 is optimized for replacement lighting. It can be applied to bulbs and MR lamps without changing design with its standard size of 3.0 x 3.0 mm. It can be driven to the maximum of 1.5W, providing high-lumen output at mid-power prices.

Features

- Optimized for small-form factor applications
- High efficiency
- LM80 6,000hrs completed
- The best lumen maintenance of 98.56% (@85°C)
- Advantageous cost for application level
- With MJT solution, 12.3% price saving in 12W bulb
- Compatible with 3030 standard size

Key Applications

- Indoor lighting
- Automotive

Portable torch Home appliance

Parameter		Llucit		Value	
		Unit	Min.	Тур.	Max.
Forward	l Current	mA	-	40	60
Forward	d Voltage	V	21.5	-	24.5
	4,700K-7,000K		-	109	-
Luminous Flux	3,700K-4,700K	lm	-	106	-
	2,600K-3,700K		-	103	-
С	RI	-	80	-	-
Viewin	g Angle	0	-	120	-
Junction Temperature		°C	-	125	-
Storage Te	emperature	°C	-40	-	+100
Thermal Resi	stance (J to S)	°C/W	-	9	-

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SAW8C72A

New Product Acrich MJT 5050

Product Brief

Acrich MJT 5050 has high lumen intensity, reliability, and price competitiveness (lm/\$). It is optimized for outdoor lighting such as street lights, security lights, tunnel lighting and warehouse lighting such as high-bay and low-bay.

Features & Benefits

- Available at max.4.5 W for outdoor applications
- High luminous flux up to max.440 lm
- High price competitiveness (lm/\$)
- Decrease of payback period by 30%
- High reliability for extreme environment

▲ SAW8LH0A (Warm) ▲ SAW0LH0A (Cool)

Key Applications

- Outdoor lighting
- g Industrial lighting bay • Down light / PAR

Street lighting

- High bay / Low bay Do
- ng Street lig

Electro – Optical Characteristics, T_i=25°C

	Color	I _F [mA]	V _F [V]	Power [W]	Luminous flux [lm]	lm/W
SAWOLHOA	Cool	20	63.8	1.28	180	141
SAW8LH0A	Warm	20	63.8	1.28	155	121

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