



LIGHTING SOLUTIONS

Power LEDs
Top-View LEDs
HV LEDs
UV & IR LEDs
LED drivers
Heatsinks
Lenses
Customized solutions



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LG Innotek, a South Korean company and a worldwide leader in manufacturing of LED components and semi-finished products since the year 2000.



Quality, high efficacy and long lifetime are achieved through the control of the whole process, from EPI growth, through chip etching, packaging and ending on LED module production, which are working on the whole world.

The component portfolio includes mid and high power white LEDs, COBs and UV LEDs. Constant development of the technology allowed LG Innotek to be one of the first manufacturers using flip-chip, and improvement of it - leading to the soon available Advanced Flip Chip (A-FC).

Seoul Semiconductor is a South Korean company which develops and commercializes light emitting diodes (LEDs) for automotive, general illumination, specialty lighting, and backlighting markets.



*

SEOUL SEMICONDUCTOR

As one of the biggest LED manufacturer globally, Seoul Semiconductor holds more than 12,000 patents, and offers a wide range of technologies, and mass produces innovative LED products such as SunLike, Wicop, NanoDrivers, Acrich and nPola.

Brightek Optoelectronics is a Taiwanese LED manufacturer, with a very wide portfolio. Starting with low power chip LEDs, and ending at 12W Power LEDs and very powerful LED modules. Brightek offers also special LEDs for plant growth and food lighting.



In order to meet the high demand for optoelectrical products worldwide, Brightek has been developing all kinds of LEDs from PTH Lamp, SMD, Superflux, and High Power since 2001. In 2011, the latest Eutectic Processing has been utilized in High Power series products including K1, 3535, 5252 and 2016 packages, making them competitive to other main manufacturers.

Taiwan Semiconductor was founded in 1979. The corporation specializes in manufacturing rectifiers, analog ICs and transistors. Since its establishment, TSC has gained a worldwide reputation for its excellence in products quality.



Taiwan Semiconductor products have been predominantly implemented in home electrical appliances, telecommunication products, equipment instruments, automotive, industrial and computer applications. TSC is looking forward for customers' special application requirements. The LED drivers from Taiwan Semiconductor are designed for various applications, and allow to build robust and reliable power supplies, which are a guarantee of a long lamp life time.

Fischer Elektronik is the leading manufacturer of high performance heatsinks and concepts for semiconductor cooling, connectors, brackets, accessories for optoelectronics, cases and 19" extension systems.



Additionally, the manufacturer offers accessories for electronic components and customized products, which can be produced according to the individual specification. The portfolio is split into three main sections - heatsinks, connectors and cases. For the LED industry the heatsinks and other thermal management materials are a must, and Fischer Elektronik is one of the leading suppliers.

Global Connector Technology Limited (GCT) is a leading designer and manufacturer of standard and custom interconnect products.

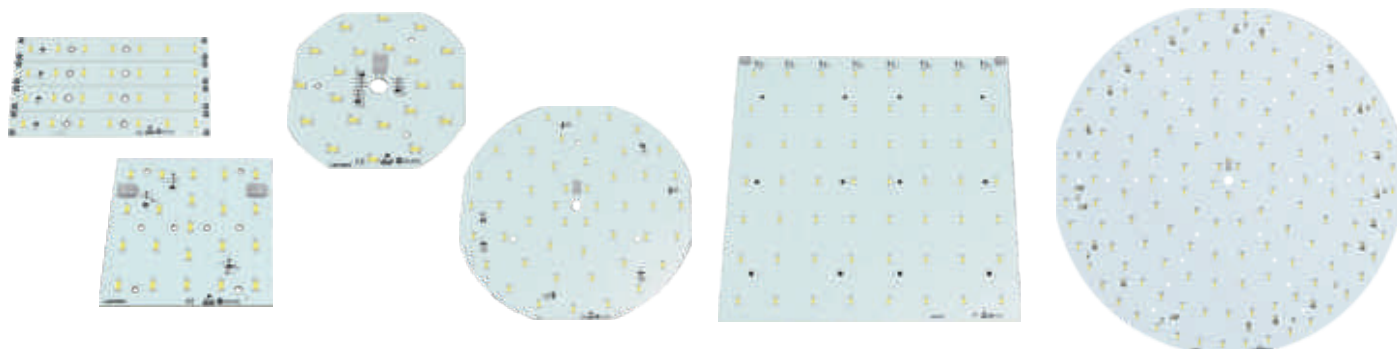


GCT is focusing on quality & reliable connectors for applications in Wireless Communication, Computer & Peripherals, Digital Entertainment, Networking, Industrial, Automation, Medical, Instrumentation, Security and other Consumer Electronics Products.

GCT offers interconnect products that are UL, ISO9001:2000 and RoHS compliant.

LED Modules

Microdis offers a wide selection of off-the-shelf LED modules, based among others on the 5630 diode with high efficiency and CV or CC power supply options. The modules are available in 3000K, 4000K and 5600K colors and standard shapes – square, round and linear. Sizes reach up to 44cm in diameter (round) and 30cm edge length (square). For the biggest modules the flux reaches up to 7500lm (when LEDs are driven with 120mA). The module efficacy can reach more than 160lm/W (when LEDs are driven with 60mA).

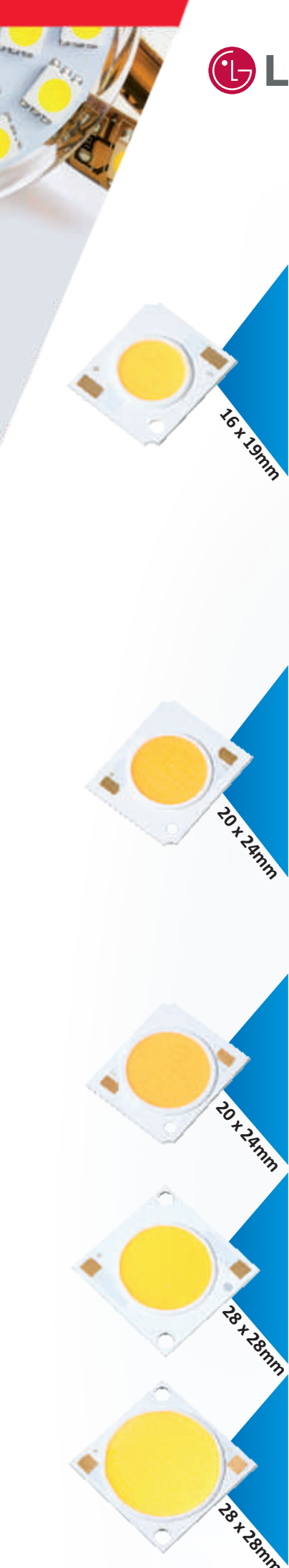


Shape	Size	Power Supply *	flux @3000K(120mA)	flux @4000K(120mA)	flux @5600K(120mA)	LED quantity	Part number
Round	11cm	24V CV (60mA or 120mA) or CC	983	1084	1134	21	LEDMOD_R:11cm
Round	14cm	24V CV (60mA or 120mA) or CC	1310	1445	1512	28	LEDMOD_R:14cm
Round	17cm	24V CV (60mA or 120mA) or CC	1638	1806	1890	35	LEDMOD_R:17cm
Round	20cm	24V CV (60mA or 120mA) or CC	1966	2167	2268	42	LEDMOD_R:20cm
Round	23cm	24V CV (60mA or 120mA) or CC	2293	2528	2646	49	LEDMOD_R:23cm
Round	26cm	24V CV (60mA or 120mA) or CC	2621	2890	3024	56	LEDMOD_R:26cm
Round	29cm	24V CV (60mA or 120mA) or CC	3276	3612	3780	70	LEDMOD_R:29cm
Round	32cm	24V CV (60mA or 120mA) or CC	3604	3973	4158	77	LEDMOD_R:32cm
Round	35cm	24V CV (60mA or 120mA) or CC	5242	5779	6048	112	LEDMOD_R:35cm
Round	38cm	24V CV (60mA or 120mA) or CC	6552	7224	7560	140	LEDMOD_R:38cm
Round	41cm	24V CV (60mA or 120mA) or CC	6552	7224	7560	140	LEDMOD_R:41cm
Round	44cm	24V CV (60mA or 120mA) or CC	6552	7224	7560	140	LEDMOD_R:44cm
Square	2x2cm	24V CV (60mA or 120mA)	328	361	378	7	LEDMOD_Q:2x2cm
Square	10x10cm	24V CV (60mA or 120mA) or CC	983	1084	1134	21	LEDMOD_Q:10x10cm
Square	15x15cm	24V CV (60mA or 120mA) or CC	1310	1445	1512	28	LEDMOD_Q:15x15cm
Square	20x20cm	24V CV (60mA or 120mA) or CC	1966	2167	2268	42	LEDMOD_Q:20x20cm
Square	25x25cm	24V CV (60mA or 120mA) or CC	2621	2890	3024	56	LEDMOD_Q:25x25cm
Square	30x30cm	24V CV (60mA or 120mA) or CC	2621	2890	3024	56	LEDMOD_Q:30x30cm
Linear	10x1cm	24V CV (60mA or 120mA)	328	361	378	7	LEDMOD_L:10x1cm
Linear	20x1cm	24V CV (60mA or 120mA)	655	722	756	14	LEDMOD_L:20x1cm
Linear	30x1cm	24V CV (60mA or 120mA)	983	1084	1134	21	LEDMOD_L:30x1cm
Linear	40x1cm	24V CV (60mA or 120mA)	1310	1445	1512	28	LEDMOD_L:40x1cm
Linear	50x1cm	24V CV (60mA or 120mA)	1638	1806	1890	35	LEDMOD_L:50x1cm
Linear	15x8cm	24V CV (60mA or 120mA) or CC	1310	1445	1512	28	LEDMOD_L:15x8cm
Linear	20x10cm	24V CV (60mA or 120mA) or CC	1310	1445	1512	28	LEDMOD_L:20x10cm
Linear	10x1.2cm	24V CV (60mA or 120mA)	328	361	378	7	LEDMOD_L:10x1.2cm
Linear	20x1.2cm	24V CV (60mA or 120mA)	655	722	756	14	LEDMOD_L:20x1.2cm
Linear	30x1.2cm	24V CV (60mA or 120mA)	983	1084	1134	21	LEDMOD_L:30x1.2cm
Linear	40x1.2cm	24V CV (60mA or 120mA)	1310	1445	1512	28	LEDMOD_L:40x1.2cm
Linear	50x1.2cm	24V CV (60mA or 120mA)	1638	1806	1890	35	LEDMOD_L:50x1.2cm

*CV – Constant Voltage - with current per LED CC – constant current

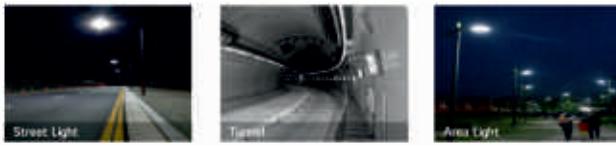
Other available options:

- Dynamic White modules – with LEDs with two CCT (3000K and 5600K) for smooth color adjustment
- 230V modules – for easy plug in
- RGB and RGBW modules – for color effects
- power LED modules – with 1-5W LEDs for more flux



Category	Part Number	CCT [K]	Forward Voltage [V]	Current [mA]	Luminous Flux [lm]	Max Current [mA]	CRI
7W (LES 9mm) Also available with LES 6.5mm	LEMWM19490MZ10xx	2700K	32.5~37.5 (34.5)	200	766	400	90
	LEMWM19480MZ10xx	2700K	32.5~37.5 (34.5)	200	922	400	80
	LEMWM19490LZ10xx	3000K	32.5~37.5 (34.5)	200	810	400	90
	LEMWM19480LZ10xx	3000K	32.5~37.5 (34.5)	200	973	400	80
	LEMWM19480KZ10xx	3500K	32.5~37.5 (34.5)	200	992	400	80
	LEMWM19490JZ10xx	4000K	32.5~37.5 (34.5)	200	858	400	90
	LEMWM19480JZ10xx	4000K	32.5~37.5 (34.5)	200	999	400	80
	LEMWM19480HZ10xx	5000K	32.5~37.5 (34.5)	200	999	400	80
10W (LES 9mm)	LEMWM19690MZ10xx	2700K	32.5~37.5 (34.5)	300	1161	600	90
	LEMWM19680MZ10xx	2700K	32.5~37.5 (34.5)	300	1398	600	80
	LEMWM19690LZ10xx	3000K	32.5~37.5 (34.5)	300	1200	600	90
	LEMWM19680LZ10xx	3000K	32.5~37.5 (34.5)	300	1432	600	80
	LEMWM19680KZ10xx	3500K	32.5~37.5 (34.5)	300	1461	600	80
	LEMWM19680JZ10xx	4000K	32.5~37.5 (34.5)	300	1514	600	80
	LEMWM19690JZ10xx	4000K	32.5~37.5 (34.5)	300	1301	600	90
	LEMWM19680HZ10xx	5000K	32.5~37.5 (34.5)	300	1514	600	80
16W (LES 13mm)	LEMWM24790MZ10xx	2700K	32.5~37.5 (34.8)	450	1788	900	90
	LEMWM24780MZ10xx	2700K	32.5~37.5 (34.8)	450	2152	900	80
	LEMWM24790LZ10xx	3000K	32.5~37.5 (34.8)	450	1840	900	90
	LEMWM24780LZ10xx	3000K	32.5~37.5 (34.8)	450	2200	900	80
	LEMWM24780KZ10xx	3500K	32.5~37.5 (34.8)	450	2244	900	80
	LEMWM24790JZ10xx	4000K	32.5~37.5 (34.8)	450	2003	900	90
	LEMWM24780JZ10xx	4000K	32.5~37.5 (34.8)	450	2332	900	80
	LEMWM24780HZ10xx	5000K	32.5~37.5 (34.8)	450	2332	900	80
21W (LES 13mm)	LEMWM24990MZ10xx	2700K	32.5~37.5 (35.0)	600	2322	1200	90
	LEMWM24980MZ10xx	2700K	32.5~37.5 (35.0)	600	2795	1200	80
	LEMWM24990LZ10xx	3000K	32.5~37.5 (35.0)	600	2418	1200	90
	LEMWM24980LZ10xx	3000K	32.5~37.5 (35.0)	600	2905	1200	80
	LEMWM24980KZ10xx	3500K	32.5~37.5 (35.0)	600	2963	1200	80
	LEMWM24990JZ10xx	4000K	32.5~37.5 (35.0)	600	2601	1200	90
	LEMWM24980JZ10xx	4000K	32.5~37.5 (35.0)	600	3028	1200	80
	LEMWM24980HZ10xx	5000K	32.5~37.5 (35.0)	600	3028	1200	80
32W (LES 15mm)	LEMWM24B90MZ10xx	2700K	32.5~37.5 (34.8)	900	3483	1800	90
	LEMWM24B80MZ10xx	2700K	32.5~37.5 (34.8)	900	4193	1800	80
	LEMWM24B90LZ10xx	3000K	32.5~37.5 (34.8)	900	3610	1800	90
	LEMWM24B80LZ10xx	3000K	32.5~37.5 (34.8)	900	4368	1800	80
	LEMWM24B80KZ10xx	3500K	32.5~37.5 (34.8)	900	4455	1800	80
	LEMWM24B90JZ10xx	4000K	32.5~37.5 (34.8)	900	3902	1800	90
	LEMWM24B80JZ10xx	4000K	32.5~37.5 (34.8)	900	4542	1800	80
	LEMWM24B80HZ10xx	5000K	32.5~37.5 (34.8)	900	4542	1800	80
42W (LES 18.5mm)	LEMWM28D90MZ10xx	2700K	32.5~37.5 (34.8)	1200	4783	2400	90
	LEMWM28D80MZ10xx	2700K	32.5~37.5 (34.8)	1200	5758	2400	80
	LEMWM28D90LZ10xx	3000K	32.5~37.5 (34.8)	1200	5005	2400	90
	LEMWM28D80LZ10xx	3000K	32.5~37.5 (34.8)	1200	5920	2400	80
	LEMWM28D80KZ10xx	3500K	32.5~37.5 (34.8)	1200	6038	2400	80
	LEMWM28D90JZ10xx	4000K	32.5~37.5 (34.8)	1200	5358	2400	90
	LEMWM28D80JZ10xx	4000K	32.5~37.5 (34.8)	1200	6238	2400	80
	LEMWM28D80HZ10xx	5000K	32.5~37.5 (34.8)	1200	6238	2400	80
56W (LES 23mm)	LEMWM28E90MZ10xx	2700K	32.5~37.5 (34.5)	1600	6269	3200	90
	LEMWM28E80MZ10xx	2700K	32.5~37.5 (34.5)	1600	7546	3200	80
	LEMWM28E90LZ10xx	3000K	32.5~37.5 (34.5)	1600	6518	3200	90
	LEMWM28E80LZ10xx	3000K	32.5~37.5 (34.5)	1600	7724	3200	80
	LEMWM28E80KZ10xx	3500K	32.5~37.5 (34.5)	1600	7878	3200	80
	LEMWM28E90JZ10xx	4000K	32.5~37.5 (34.5)	1600	7023	3200	90
	LEMWM28E80JZ10xx	4000K	32.5~37.5 (34.5)	1600	8176	3200	80
	LEMWM28E80HZ10xx	5000K	32.5~37.5 (34.5)	1600	8176	3200	80

Applications

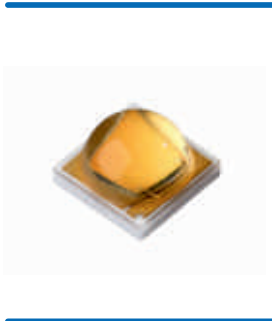


Value Proposition



H35C Series (3535)

- High lm/W solution
- Low thermal resistance
- High CRI solutions
- ANSI C78.377A 16 micro bins (warm)
- Industry standard package
- Current up to 1500mA

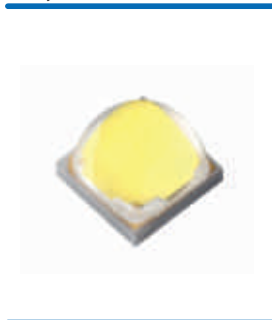


	CCT [K]	CRI min.	Flux [lm]@85°C Typ. current/Max. Current		Part number
G6	5000	70	171 @350mA	560 @1500mA	LEMWA33X80HX100A
G6	4000	80	150 @350mA	486 @1500mA	LEMWA33X80JX300A
G10	5000	70	317 @700mA	745 @2000mA	LEMWA33270HU5000
G10	4000	75	297 @700mA	688 @2000mA	LEMWA33275JU7000
G10	3000	75	284 @700mA	653 @2000mA	LEMWA33X90JXxxxx

Parameters shown above are examples for selected CCTs and ranks

H35F Series (3535 G4-L)

- High flux solution
- Cost competitive package
- High CRI solutions available
- ANSI C78.377A 16 micro bins
- Industry standard package
- Current up to 3000mA



	CCT [K]	CRI	Flux [lm]@85°C @1050mA @3000mA		Part number
G4-L	5000	70	450	1075	LEMWE33370HUxxxx
G4-L	3000	80	380	881	LEMWE33380LUxxxx
G4-L	4000	80	410	952	LEMWE33380JUxxxx
G4-L	5000	80	420	975	LEMWE33380HUxxxx
High CRI	5000	90	390	906	LEMWE33390HUxxxx

Parameters shown above are examples for selected CCTs and ranks

H70E Series (7070 15W)

- High power solution
- Four chip package, voltage 10.5-12.5V
- High CRI solutions available
- ANSI C78.377A
- Low thermal resistance, 1.7°C/W
- Current up to 1250mA (2.0A in H70F series available)



	CCT [K]	CRI	Flux [lm]@85°C @700mA @1250mA		Part number
15W	5000	70	1157	1829	LEMWA77670HUxxxx
15W	3000	80	1016	1608	LEMWA77680LUxxxx
15W	4000	80	1036	1654	LEMWA77680JUxxxx
15W	5000	80	1056	1669	LEMWA77680HUxxxx
15W	5000	90	977	1544	LEMWA77690HUxxxx

Parameters shown above are examples for selected CCTs and ranks

CSP Chip Scale Packages

- Small packages 1212,1414,1818,2323
- Cost competitive package
- Low CRI/High Flux solutions available
- New industrial standard - CSP
- Thermal resistance 7.5°C/W
- Various current options



	CCT [K]	CRI	Flux [lm]@85°C Typ. current/Max. Current		Part number
1212	5000	70	151 @350mA	203 @500mA	LEMWS12X70Hxxxx
1414	3000	80	142 @350mA	261 @700mA	LEMWS14X80Lxxxx
1818	5000	80	163 @350mA	501 @1500mA	LEMWS18X80Hxxxx
2323	5000	70	348 @700mA	855 @2000mA	LEMWS23X70Hxxxx
2323 Wall	5000	70	147 @350mA	453 @1500mA	LEMWS22X70Hxxxx

Parameters shown above are examples for selected CCTs and ranks

5630

- High lm/W solution
- Cost competitive package
- High CRI solution available
- ANSI C78.377A 16 micro bins
- Industry standard package
- Current up to 200mA, Voltage 2.7-3V

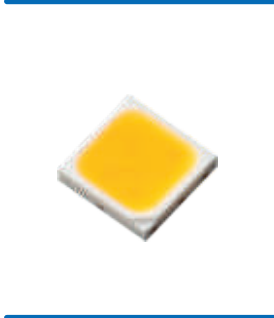


	CCT [K]	CRI min.	Flux [lm] @65mA @200mA		Part number
G3	5000	80	33.3	91.0	LEMWS59R80HZ2Bxx
G4	3000	80	32.6	89.2	LEMWS59R80LZ3Dxx
G5	4000	80	34.9	97.7	LEMWS59R80JZ3Exx
G6	5000	80	37.7	106.7	LEMWS59R80HZ2Fxx
G7 (A-FC)	5000	80	39.3	112.8	LEMWS59L80HFZGxx

Parameters shown above are examples for selected CCTs and ranks, xx- bin code

3030N

- High Efficacy package - up to 208 lm/W
- High flux packages - up to 187 lm
- High CRI and Low CRI solutions
- ANSI C78.377A 16 micro bins
- Industry standard package
- Current up to 200mA

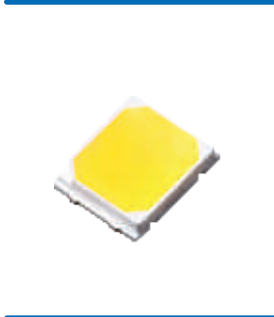


	CCT [K]	CRI	Flux [lm] @150mA @200mA		Voltage [V]	Part number
G3	4000	80	135	170.8	5.8-6.6	LEMWS36X80JZ3Bxx
Low CRI	5000	70	148	187.3	5.8-6.6	LEMWS36X70HZxxxx
High CRI	3000	90	107	135.4	5.8-6.6	LEMWS36X90HZxxxx
High Eff. 1in1	4000	80	34.8 @65mA	94.4	2.75 ~2.95	LEMWS36U80JZ3Bxx
G4 (A-FC)	5000	80	37.6 @65mA	107.7	2.65 ~2.85	LEMWS36L80Hxxxxx

Parameters shown above are examples for selected CCTs and ranks, xx - bin code

3528

- Various performance in same package
- Cost competitive package
- High CRI solutions available
- ANSI C78.377A Central binning
- Industry standard package
- Various voltages available



	CCT [K]	CRI	Flux [lm] Typ.Curr./Max.Curr.		Voltage [V]	Part number
A101	4000	80	25.2 @60mA	35.3 @90mA	2.9-3.2	LEMWS28Q80JSZ200
B102 G2	5000	80	67.5 @150mA	78.3 @200mA	2.9-3.4	LEMWS28U80HSZB0Z
B202	4000	80	34.0 @65mA	97.8 @200mA	2.5-2.9	LEMWS28R80JSZE0N
C201	4000	80	134 @150mA	167 @200mA	5.8-6.6	LEMWS38X80JZ3100
C301	4000	80	125 @100mA	138.3 @120mA	8.5-9.7	LEMWS38X80JSZx0N

Parameters shown above are examples for selected CCTs and ranks, xx - bin code



3020 EMC package



CCT [K]	CRI	2θ1/2 [°]	Flux [lm]	Voltage [V]	Current [mA]	Part Number
2580-7040	80	110	24-26	3	60	N0W20S3x*
RED	n/a	120	5.5	2.3	40	N0R20S37
YELLOW		120	4	2.3	40	N0Y20S38
GREEN		120	13.4	3.1	60	N0G20S39
BLUE		120	2.7	3.1	60	N0B20S40

*x=Color bin (1-6)

3014 EMC package



CCT [K]	CRI	2θ1/2 [°]	Flux [lm]	Voltage [V]	Current [mA]	Part Number
2580-7040	80	110	24-26	2.85	60	N0W20S0x*
2580-7040	80	110	54-62	3.1	150	N0W20S4x*

*x=Color bin (1-6)

5630 HV

- Max. current 40mA
- Cost competitive package
- Simplified power supply BOM
- ANSI C78.377A also 16 micro bins

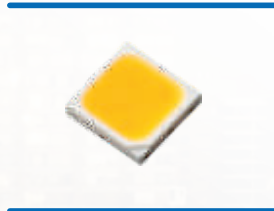


	CCT [K]	CRI	Flux [lm]	Current [mA]	Voltage [V]	Part Number
HV	3000	80	57	20	19-23	LEHWH5928LHxxxx
HV	4000	80	58.5	20	19-23	LEHWH5928JHxxxx
HV	5000	80	60.5	20	19-23	LEHWH5928HHxxxx

Parameters shown above are examples for selected CCTs and ranks

3030 HV

- Max. current 50mA, 25mA
- Cost competitive package
- Various voltage selection
- Simplified power supply BOM



	CCT [K]	CRI	Flux [lm]	Current [mA]	Voltage [V]	Part Number
HV	5000	80	162	42	19-34	LEMWH36380HHxx
HV	3000	80	137	20	63-71	LEHWH36680LHxx
HV	5000	80	158	20	63-71	LEMWH36680HHxx

Parameters shown above are examples for selected CCTs and ranks

5250 HV

- Max. current 50mA, 25mA
- High Flux solution
- Various voltage selection
- Simplified power supply BOM



	CCT [K]	CRI	Flux [lm]	Current [mA]	Voltage [V]	Part Number
HV	5000	80	175	42	28-32	LEMWH51W80HHxxxx
HV	3000	80	155	20	59-67	LEHWH51Y80LHxxxx
HV	5000	80	167	20	59-67	LEHWH51Y80HHxxxx


Parameters shown above are examples for selected CCTs and ranks

LED Drivers

	Application	Part Number	Package Type	Topology	Dimming	Input Voltage [V]	Output current [A]	Output Voltage Max. [V]	Efficiency	C.C.
DC-DC	Converter	TS19371CX6	SOT-26	Boost	PWM	2.5-18	0.65	36	> 85%	± 5%
	Controller	TS19375CS	SOP-8	Boost	PWM	3-24	0.6	12-24	> 85%	
	Converter	TS19376CY5	SOT-89-5L	Buck	PWM	8-32	1	<Vcc	> 90%	± 5%
		TS19377CS	SOP-8	Buck	-	3.6-23	2	<Vcc	> 90%	± 5%
		TS19378CS	SOP-8	Buck	PWM	8-40	2	<Vcc	> 90%	± 5%
Linear	Regulator	TS19601CP5	TO-252-5L	Linear	PWM	5-50	0.7	<75	-	-
		TS19603CS	SOP-8EP	Linear	PWM	5-50	0.4	<75	-	-
AC-DC	Converter	TS19451CY	SOT-89	Buck	-	85~264VAC	0.05	<475	> 90%	± 5%
		TS19452CS	SOP-8	Buck	-	85~264VAC	0.1	<475	> 90%	± 5%
	Controller	TS19450CS	SOP-8	Buck	PWM / Linear	8.0~450VDC	-	-	> 90%	± 10%
	Controller	TS19460CS	SOP-8	Buck	PWM / Linear	8.0~450VDC	-	-	> 90%	± 5%
	Controller	TS19702CX6	SOT-26	Buck	PWM / Linear	8.0~450VDC	> 0.9	< 30%	> 90%	± 5%
	Controller	TS19720CX6	SOT-26	Buck	-	8.0~450VDC	> 0.9	< 15%	> 90%	± 2.5%
	Controller	TS19721xCS	SOP-8	Buck	-	8.0~450VDC	> 0.9	< 15%	> 90%	± 2.5%
	Controller	TS19730CX6	SOT-26	Buck	-	8.0~450VDC	> 0.9	< 10%	> 88%	± 2.0%
	Controller	TS19705CX6	SOT-26	PSR / Buck-Boost	-	8.0~450VDC	> 0.9	< 15%	> 85%	± 3%
	Controller	TS19310A/BCX6	SOT-26	PSR / Buck-Boost	TRIAC	8.0~450VDC	> 0.9	< 15%	> 75%	± 3%
	Controller	TS19740CX6	SOT-26	Buck	-	8.0~450VDC	> 0.9	< 20%	> 90%	± 2.5%
	Controller	TS19320CS	SOP-8EP	PSR / Buck-Boost	TRIAC	8.0~450VDC	> 0.9	< 15%	> 86%	± 3%
	Controller	TS19330CS TS19331CS	SOP-8	PSR / Buck-Boost	PWM / Linear	8.0~450VDC	> 0.9	< 15%	> 86%	± 3%

UV-A 3535

- 130°, 75° or 55° angle
- Flat or with lens
- 365-415nm wavelength
- Up to 2530mW optical power




UV-B 6060

- 129° or 126° angle
- One form factor for UV-B & UV-C
- 305nm wavelength
- 10mW or 20mW optical power

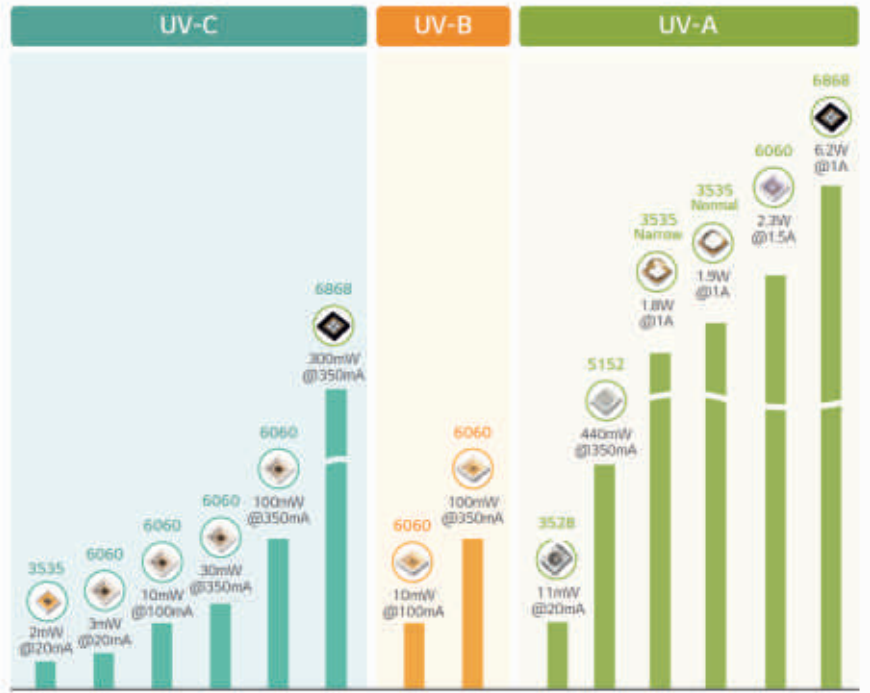


UV-C 6060

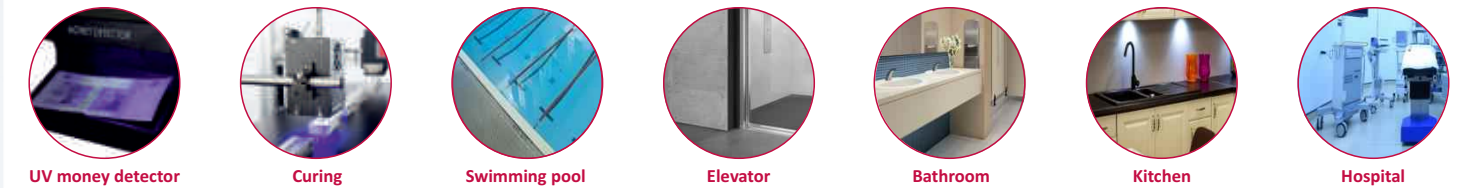
- 126° or 120° angle
- One form factor for UV-B & UV-C
- 278nm wavelength
- 3, 10, 30 or 70mW optical power



UV LED Product Line-up



Applications - consumer and industrial: detection, curing & disinfection



UV money detector



Curing



Swimming pool



Elevator



Bathroom



Kitchen



Hospital



BRIGHTTEK
BRIGHTTEK (EUROPE) LIMITED

3535 Infrared (IR)

- Security Device
- Surveillance Camera
- Plant Growing Light
- De-Icing for Traffic Signs
- Automotive: Event Data Recorder*



Part number	Product Description							
NOF10S09	3535 2.0t	Infrared (IR)	840-870nm	1~4W	350/1400mA	275/832mW	1.6V	60°
NOF10S11	3535 2.0t	Infrared (IR)	840-870nm	1~4W	350/1400mA	275/832mW	1.6V	120°
NOF16S71	3535 2.0t	Infrared (IR)	840-870nm	1~3W	350/1000mA	250/650mW	1.6V	120°
NOF16S72	3535 2.0t	Infrared (IR)	840-870nm	1~3W	350/1000mA	250/650mW	1.6V	60°
NOF16S73	3535 2.0t	Infrared (IR)	840-870nm	1~2W	350/600mA	225/382mW	1.6V	120°
NOF16S74	3535 2.0t	Infrared (IR)	840-870nm	1~2W	350/600mA	225/382mW	1.6V	60°
NOF16S32P	3535 Flat 1.0t	Infrared (IR)	840-870nm	1~3W	350/1000mA	240/650mW	1.6/2.2V	120°
NOF16S33P	3535 Flat 1.0t	Infrared (IR)	930-950nm	1~3W	350/500mA	240/410mW	1.6/1.8V	120°

Available with 60°, 120° and Flat lens

3535 Ultraviolet (UV)

- Industrial Curing
- Air Purifier
- Poster Printing Curing
- Counterfeit Money Detector
- Blood Detector
- Nail Curing
- Teeth Curing



Part number	Product Description							
NOQ10S93	3535 2.0t	Ultraviolet (UV)	390-410nm	1~2W	500/700mA	740/984mW	3.72V	120°
NOQ10S94	3535 2.0t	Ultraviolet (UV)	390-410nm	1~2W	500/700mA	740/984mW	3.72V	60°
NOQ10S95	3535 2.0t	Ultraviolet (UV)	380-390nm	1~2W	500/700mA	740/984mW	3.72V	120°
NOQ10S96	3535 2.0t	Ultraviolet (UV)	380-390nm	1~2W	500/700mA	740/984mW	3.72V	60°
NOQ16S79	3535 2.0t	Ultraviolet (UV)	410-430nm	1~2W	500/700mA	740/984mW	3.72V	120°
NOQ16S80	3535 2.0t	Ultraviolet (UV)	410-430nm	1~2W	500/700mA	740/984mW	3.72V	60°
NOQ19S08	3535 2.0t	Ultraviolet (UV)	365-370nm	1.85W	500mA	450mW (typ.)	3.7V	120°
NOQ16S79Z	3535 2.0t	Ultraviolet (UV)	410-430nm	1~2W	500/700mA	740/984mW (typ.)	3.72V	120°
NOQ09S11Z	5252 3.1t	Ultraviolet (UV)	390-410nm	7.25W	500mA	2700mW/700mW/sr	14.5V	145°

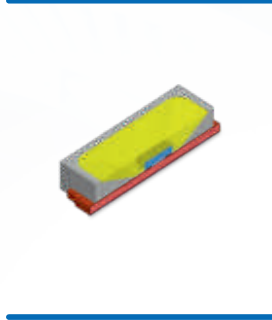
Available with 60° and 120° lens

NEW Technology: A-FC

Advanced Flip-Chip (A-FC) is LG Innotek's, modern and state of the art implementation of The Flip Chip. A-FC brings more efficient, more robust and more reliability in well known, standard LED packages. Other packages will be also available, including COBs. The A-FC components are impacted less by mechanical and electrical stress than currently used LEDs, and prove to have higher flux, due to the elimination of shadows caused by the wiring.

A-FC Advantages

- Higher Efficacy
- Symmetric Emitting
- Lower Gas Permeating
- No ESD damaging
- No Wiring
- No Re-melting



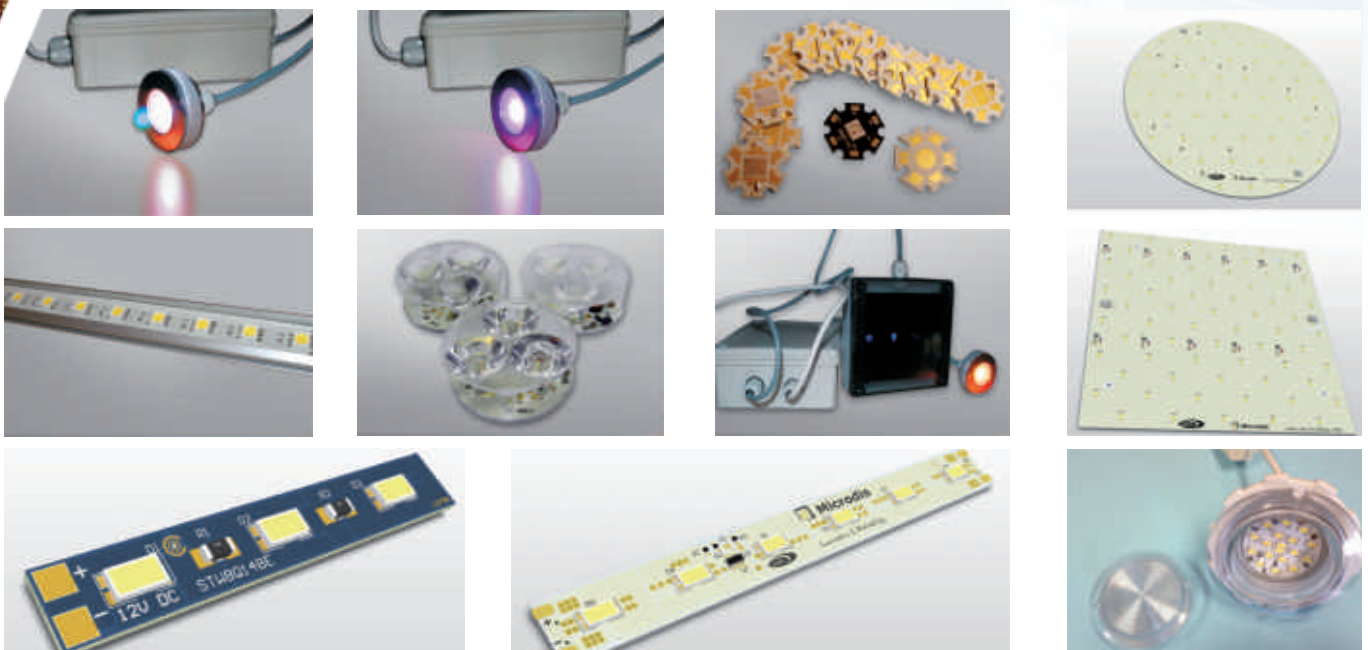
Coming soon

A-FC 5630 G7	A-FC 3030 (3V) (1in1)	A-FC 3030 (3V) (2Pin1)	A-FC 3030 (6V) (2Sin1)	
39.3lm, 220lm/W	38.3lm, 215lm/W	38.9lm, 220lm/W	150lm, 164lm/W	5000K
37.8lm, 211lm/W	37.2lm, 208lm/W	37.6lm, 213lm/W	146lm, 158lm/W	4000K

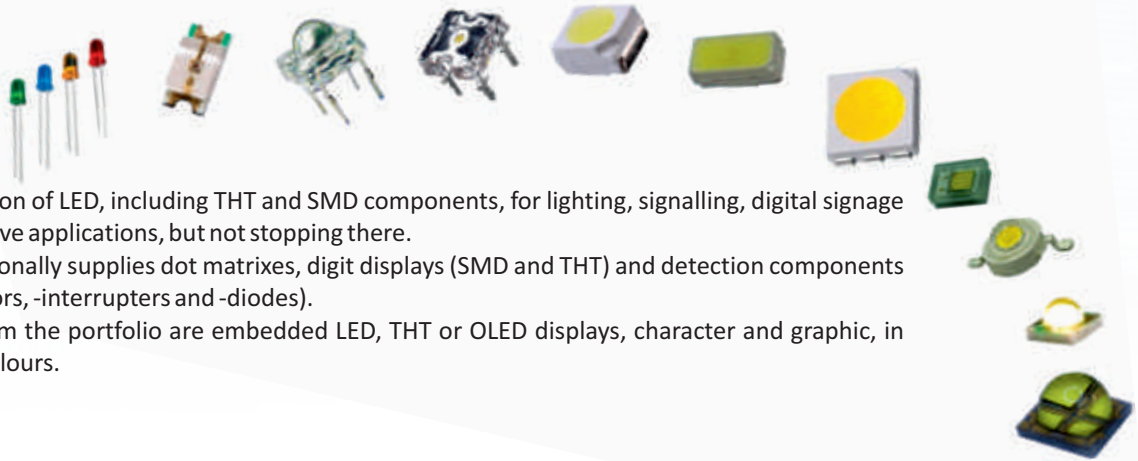
Higher Efficacy	Symmetric Emitting	Lower Gas Permeating	No ESD damaging	No Wiring	No Re-melting
Lower Voltage Higher Power	Center positioning Higher color uniformity Freedom of lens design Smaller COA deviation	Excellent sealing Resistance to S, Cl & others Narrower exposed Ag surf. No color degradation	Flip Chip Resistant to ESD (optional) -2kV Warranty w/o ZD -8kV Warranty w/o ZD	Wider Bonding Area Fast Heat dissipation No Thermal coloring Lower contact resist. Higher Input Current	Facing Flip Bonding Solder or Paste no melting @300°C TS= 1000 cycles After Remelting @250°C
 5630 3V POB	 3030 6V POB	 Ray Profile	 Standard chip Advanced Flip Chip	 Embedded Zener Diode	 Flip Chip
					 Competitor 'Solder Remelting'
					 LGIT

Design Support

Microdis Electronics also offers custom designed LED lighting solutions. The idea is all the customer has to have. Our team of engineers will put that idea into a real product. Our offer includes LED strips, custom designed LED lamps, waterproof LED lighting for bathtubs or showers, including a capacitive touchpanel, and many others.



Other optoelectronic components (DIP, signalling & chip LED, displays)



Wide selection of LED, including THT and SMD components, for lighting, signalling, digital signage and automotive applications, but not stopping there.

Brightek additionally supplies dot matrixes, digit displays (SMD and THT) and detection components (photo-transistors, -interrupters and -diodes).

Also available from the portfolio are embedded LED, THT or OLED displays, character and graphic, in various sizes and colours.

Accessories

Heatsinks



LEDs, with their high performance and long life, are growing exponentially in popularity. This tendency is even enhanced by the increasing efficiency and falling prices. However, to make the best possible use of all the benefits offered by LEDs, efficient thermal management is indispensable. To meet this requirement, Fischer Elektronik has developed a special product range: heatsinks for LED applications. Modified heatsink variants and versions specially adapted to customized LED applications are manufactured according to customers' specifications using advanced CNC machining centres or through extrusion.



Lenses

Lenses in many diameters and heights. Manufactured also in NJC™ Technology. Available in narrow, medium, elliptical and wide beams. Holders available in white, black and clear color. These offer high efficiency and no vibration problems.



Connectors for LED applications



White Lite- Low cost PCB connector solution for Solid State Lighting

GCT's White Lite is a range of lighting connectors suitable for use in solid state lighting (SSL) applications. The range includes board to board and wire push in connectors.

WIRE TRAP CONNECTORS 2.40 & 4.00MM PITCH

BL300 2.40mm pitch, height of 3.60mm (max) with a footprint of 7.90mm x 7.60mm in three circuits. Cables with stranded conductors in 22 & 24 AWG.
BJ302 4.00mm pitch, height of 4.50mm (max) with a footprint of 11.8mm x 11.45mm in three circuits. Solid conductors in 18 to 24 AWG and stranded conductors in 20 to 22 AWG.

WHITE LITE BOARD TO BOARD 4.00MM PITCH - PLANAR MATING















BJ300 & 301 are two position surface mount board to board connectors perfect for LED strip light applications. Mated connector height is 2.6mm, with a total mated footprint of 8.80mm (width) x 11.00mm (depth).

WHITE LITE BOARD TO BOARD 2.54MM PITCH - PLANAR MATING

The BG300-306 range are LED light strip connectors both surface mount and through hole. Post and box style connectors offer mating combinations of header and socket. One piece U-shaped connectors BG304 & 305 may be hard soldered to your PCB or mated to BG306 single row sockets



For further information and a design optimized solution please contact one of our Field Application Engineers. Contact details are available on the last page.

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SEOUL SEMICONDUCTOR
TAIWAN SEMICONDUCTOR
U-BLOX
WEZAG

Industrial computers and panels
 RFID systems and transponders
 Mini-ITX industrial board
 Power, THT and chip LEDs and LED modules
 Interconnect components, electronic housings, 19" cabinets
 Crystals, oscillators, filters and sensors
 Military, medical and industrial connectors
 Heatsinks, connectors, 19" and case technology
 SIM-Holders, memory card connectors, USB connectors
 Large Format Displays
 Optocouplers, optoswitches
 Signal connectors
 Automotive and white goods connectors
 Lighting LEDs, mid and high power, CSP packages, UV LEDs
 GPS, Galileo, Glonass, Iridium antennas
 Machines and systems for wire crimping
 Reed switches, sensors and relays
 UL/CSA/DIN certified, customized industrial cables
 Terminal block connectors - screw, spring and pins
 Industrial computers and panels
 Lighting LEDs, AC modules & drivers, Wicop2 packages
 Semiconductor devices
 GNSS, GSM, UMTS/HSPA/CDMA/LTE/NBIoT modules, WiFi,
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 Hand tools for crimping, pneumatic presses

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Currently the Microdis Group employs over 100 people, with a large number of electronic engineers, mostly involved in sales and marketing.

As a company with an extensive experience in the distribution of electronic components, and a purchasing center in Germany for many years, we are able to offer almost any product from a wide variety of electronic components. We offer also the production of cable harnesses and programming of crystal oscillators for a customised frequency. Cooperation with a catalogue distributor provides fast deliveries (2 days) of a wide range of catalogue products.

We have certificates of quality management DIN EN ISO 9001:2015 for the distribution of electronic components.

EN v.2.7

GSM/3G/LTE

GPS/GNSS

LED

Embedded

Passive

Semicon

Electromech

