

Light is freedom of design

The new SYNIOS[®] P2720 platform

One family. One footprint. Full performance & flexibility.

Light is **OSRAM**






OSRAM
Opto Semiconductors

Full performance, high flexibility

OSRAM Opto Semiconductors' new SYNOS® P2720 platform with 15 different products allows for outstanding flexibility with one footprint for various power classes and applications. Ease of scalability and great freedom of design are accompanied and amplified by high thermal reliability and high brightness, delivering new opportunities and cost advantages for automotive manufacturers and light designers.



Designed for a large number of applications from midpower to highpower

SYNOS® family		InGaN white	InGaN CY yellow	InGaAIP yellow	InGaAIP red	InGaAIP superred
						
1mm ²	Type	KW DMLS31.SG	KY DMLS31.FY	KY DMLS31.23	KR DMLS31.23	KS DMLS31.23
	Brightness (lm@mA)	190/245 min/typ	90/120 min/typ	63/95 min/typ	71/120 min/typ	56/85 min/typ
	Bin (brightness-cxycy)	5MF5N-ebvF46-fcbB46	7K6LF – 5F	8J7L – 4-6	5K8L – 2-6	7J8K – 1
	Rth real typ (K/W)	~7	~7	~7	~7	~7
	Binning If/Max If (mA)	700/1000	600/700	700/1000	700/1000	700/1000
	Vf typ	3.00	3.00	2.35	2.25	2.25
	Efficiency (lm/W)	~110	~60	~65	~80	~50

Data may vary

						
750µm	Type	KW DMLQ31.SG	KY DMLQ31.FY	KY DMLQ31.23	KR DMLQ31.23	KS DMLQ31.23
	Brightness (lm@mA)	90/125 min/typ	42.4/55 min/typ	33/45 min/typ	33/55 min/typ	28/40 min/typ
	Bin (brightness-cxycy)	7K6LF-ebvF46-fcbB46	8HF8J – 5F	HYJZ – 4-6	HYKX – 2-6	HXJY – 1
	Rth real typ (K/W)	~10	~10	~10	~10	~10
	Binning If/Max If (mA)	350/700	300/400	350/500	350/500	350/500
	Vf typ	3.00	3.0	2.35	2.25	2.25
	Efficiency (lm/W)	~110	~60	~65	~80	~50

Data may vary

						
500µm	Type	KW DMLN31.SG	KY DMLN31.FY	KY DMLN31.23	KR DMLN31.23	KS DMLN31.23
	Brightness (lm@mA)	50/65 min/typ	22.4/30 min/typ	21/25 min/typ	21/35 min/typ	15/20 min/typ
	Bin (brightness-cxycy)	6J6K-ebvF46-fcbB46	7G7H – 5F	GYJX – 4-6	GYJX – 2-6	FZHX – 1
	Rth real typ (K/W)	~20	~20	~30	~30	~30
	Binning If/Max If (mA)	200/300	150/200	200/250	200/250	200/250
	Vf typ	3.00	3.00	2.35	2.25	2.25
	Efficiency (lm/W)	~110	~60	~65	~80	~50

Data may vary



The SYNIOStm P2720 family allows special design flexibility

Advantages

More opportunities for innovative automotive light design. SYNIOStm P2720 is a very powerful and reliable LED package that excels through its high brightness, low thermal resistance and thermal stability. Featuring different chip size classes and colors with one common footprint, the SYNIOStm P2770 family also shines with high flexibility and full scalability. Another great advantage of the new SYNIOStm platform is its exceptional temperature cycle stability. The lead frame part is optimized for the thermal expansion coefficient of the circuit board, thus securing very stable soldered joints.

Moreover SYNIOStm P2720 also allows significant cost savings. Thanks to a higher brightness at T_j the amount of the required LEDs can be reduced, and there is no need for the next brighter brightness bin. In addition, standard PCB materials can be used due to low thermal resistance. But perhaps the greatest strength of the new SYNIOStm family is the great design freedom that it offers. Even extremely compact and flexible light guide designs with high efficiency flux in can be easily implemented.



Ideal for light guide applications

Benefits

- Improved brightness and cost advantages
- Design freedom
- High reliability
- Scalability

Applications

- Forward lighting
- Signaling/DRL
- Rear combination light

Features

Highlights

- Large variety of color and brightness
 - 3 chip sizes: compact package for the electrical power range from 0.5 – 3W
 - 5 colors: white, conversion yellow, yellow, red, superred
- Narrow color-binning for white
- High reliability package
- High efficiency due to optimized design
- Good thermal performance
- Ideally suited for light guide applications

Package

- Small product size: $2.0 \times 2.75 \times 0.6 \text{ mm}^3$
- White SMD epoxy package
- ThinGaN (UX:3); Thinfilm TF5
- White with chip-level conversion
- Yellow with volume conversion
- $T_j = 150 \text{ }^\circ\text{C}$ (T_{max})
- Distance of electrical pads: 0.3 mm
- Automotive quality
- L80B50 @ 10.000 h

Processability

- For standard PCB's (FR4)
- Simple solder pad design
- Self-alignment to the solder pad @ soldering
- Side wetting indicator after soldering



SYNIOS® P2720 on the Internet:
www.osram-os.com/synios-p2720

For further information on the available products please visit our product catalog at <http://catalog.osram-os.com>

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