



OSA Opto Light GmbH

Köpenicker Str. 325

Haus 201

12555 Berlin

Germany

Phone : +49-(0)30-65 76 26 83

Fax : +49-(0)30-65 76 26 81

contact@osa-opto.com

www.osa-opto.com

Products

Epitaxial chips for use in optoelectronic devices

Edition 1 / 2006

A large, rectangular, light blue-green epitaxial chip is shown at an angle, appearing to be a wafer. The surface is covered in a dense grid of small, square, raised structures, likely micro-LEDs or similar optoelectronic components. The chip is set against a white background.

Material	Item No.	Wavelength	$V_{f\text{typ}}$	$V_{f\text{max}}$	$I_{v\text{min}}$	$I_{v\text{typ}}$	I_F
		$[\lambda_p / \text{nm}]$ * $[\lambda_d / \text{nm}]$	[V]	[V]	[mcd] *[mW]	[mcd] *[mW]	
<i>STANDARD RED</i> GaAsP/GaAs p-side up	101205	660	1,65	1,84	0,30	0,60	20
	102205	660	1,65	1,84	0,25	0,40	10
	105206	660	1,65	1,84	0,17	0,25	7
	105207	660	1,65	1,84	0,15	0,20	7
	105208	660	1,65	1,84	0,15	0,20	7
	105209	660	1,65	1,84	0,15	0,20	7
<i>RED</i> GaAlAs/GaAs SHS n-side up DHS n-side up DHS p-side up DHS n-side up Low current MDH n-side up DDH MDH p-side up DDH	113110	655	1,80	2,00	3,5	5,0	20
	114110	655	1,85	2,10	5,5	7,0	20
	114120	655	1,85	2,10	7,0	9,0	20
	114130	650	1,85	2,10	9,0	14,0	20
	114210	655	1,85	2,10	5,5	7,0	20
	114220	655	1,85	2,10	7,0	9,0	20
	114230	650	1,85	2,10	9,0	12,0	20
	114515	655	1,65	1,80	0,5	0,9	2
	115160	655	1,90	2,30	12,0	16,0	20
	115180	655	1,90	2,30	22,0	28,0	20
	115260	660	1,90	2,30	12,0	16,0	20
115280	660	1,90	2,30	17,0	22,0	20	
<i>INFRA-RED</i> GaAs/GaAs n-side up p-side up	120124	930	1,20	1,40	0,9*	1,0*	20
	120134	950	1,25	1,40	1,0*	1,5*	20
	120214	930	1,20	1,40	0,6*	0,8*	20
	120234	950	1,25	1,40	1,0*	1,3*	20
<i>INFRA-RED</i> GaAlAs/GaAs p-side up	131234	950	1,20	1,40	2,0*	2,4*	20
	131244	950	1,25	1,45	2,4		20
<i>INFRA-RED</i> GaAlAs/GaAlAs SH n-side up SH n-side up	123144	870	1,30	1,50	1,3*	1,8*	20
	123144H	880	1,30	1,50	1,3*	1,8*	20
	128144	910	1,30	1,50	1,3*	1,8*	20

Material	Item No.	Wavelength	V _{Ftyp}	V _{Fmax}	I _{Vmin}	I _{Vtyp}	I _F
		[λ _p / nm] *[λ _d / nm]	[V]	[V]	[mcd] *[mW]	[mcd] *[mW]	[mA]
<i>INFRA-RED</i>							
GaAlAs/GaAlAs							
MDH n-side up	115161L	670	1,90	2,30	1,3*	1,6*	20
DDH p-side up	115261L	670	1,90	2,30	1,3*	1,6*	20
MDH n-side up	115161H	680	1,90	2,30	1,4*	1,7*	20
	137141L	690	1,90	2,30	1,5*	1,8*	20
	137141	700	1,90	2,30	1,5*	1,8*	20
	137141H	710	1,80	2,10	1,6*	2,0*	20
	127141L	720	1,70	2,10	2,0*	2,4*	20
	127141D	724	1,70	2,10	2,5*	3,0*	20
	127141N	730	1,70	2,10	2,2*	2,6*	20
	127141	740	1,70	2,10	2,4*	2,8*	20
DH n-side up	127124	740	1,70	2,10	0,6*	0,8*	20
MDH n-side up	127141H	750	1,70	2,10	2,4*	2,8*	20
	124141L	760	1,70	2,10	2,4*	2,8*	20
	124141	770	1,70	2,10	2,4*	2,8*	20
	124141H	780	1,70	2,10	2,4*	3,2*	20
	132141L	790	1,70	2,10	2,4*	3,3*	20
	132144	800	1,60	2,10	2,5*	3,4*	20
	125144L	805	1,60	2,10	2,5*	3,4*	20
	125144	810	1,55	1,80	3,0*	3,4*	20
MDH p-side up	125244	810	1,50	2,00	2,5*	3,2*	20
MDH n-side up	134144	820	1,55	1,80	2,5*	3,4*	20
	135144	840	1,55	1,80	2,5*	3,4*	20
	136144	850	1,50	1,80	2,5*	3,4*	20
DDH p-side up	136274	850	1,35	1,60	3,8*	4,5*	20
DH n-side up	126124	860	1,30	1,60	0,9*	1,2*	20
MDH n-side up	126164	870	1,35	1,60	3,8*	4,6*	20
MDH p-side up	126244	870	1,30	1,50	2,6*	3,0*	20
	126254	870	1,30	1,50	2,8*	3,2*	20
	126244F	870	1,30	1,50	1,8*	2,2*	20
	126254H	885	1,30	1,50	2,6*	3,0*	20
	126264	870	1,30	1,50	3,2*	3,7*	20
DDH p-side up	126284	870	1,35	1,60	3,7*	4,5*	20
MDH n-side up	133154	905	1,30	1,60	2,8*	3,2*	20
MDH p-side up	133254	905	1,25	1,50	2,6*	3,2*	20
	128244	920	1,25	1,50	2,6*	3,0*	20
	128254	920	1,25	1,50	2,8*	3,2*	20

Material	Item No.	Wavelength	V _{Ftyp}	V _{Fmax}	I _{Vmin}	I _{Vtyp}	I _F	
		[λ _p / nm] *[λ _d / nm]	[V]	[V]	[mcd] *[mW]	[mcd] *[mW]	[mA]	
<i>GREEN</i> GaP/GaP p-side up	160210	568	2,25	2,50	2,0	4,5	20	
	160220	568	2,25	2,50	4,5	8,0	20	
	160230	568	2,25	2,50	6,5	10,0	20	
	n-side up	160130	568	2,25	2,50	6,5	10,0	20
		p-side up	160240	568	2,25	2,50	10,0	13,5
		160250	568	2,25	2,50	11,5	15,0	20
		160260	568	2,25	2,50	13,0	16,5	20
	Low current	160622	568	1,95	2,20	0,5	0,7	2
	pure green	161210	557	2,30	2,60	1,4	2,0	20
	standard more green	162220	563	2,25	2,50		8,0	20
standard green	163230	566	2,25	2,50		11,0	20	
<i>GREEN</i> AlInGaP/GaAs p-side up	160272	572*	2,10**	2,40**		26,0	10	
	pure green	161230	560*	2,20	2,50		11,0	20
<i>YELLOW</i> GaAsP/GaP p-side up	170210	590	2,20	2,50	2,0	3,0	20	
	170220	590	2,20	2,50	3,5	6,0	20	
	Low current	170622	590	1,85	2,05	0,18	0,30	2
<i>YELLOW</i> AlInGaP/GaAs p-side up	170272	590*	2,10**	2,40**		40,0	10	
	170282	590*	2,10**	2,40**		70,0	10	
	171282	580*	2,10**	2,40**		55,0	10	

Material	Item No.	Wavelength	V _{Ftyp}	V _{Fmax}	I _{Vmin}	I _{Vtyp}	I _F
		[λ _p / nm] *[λ _d / nm]	[V]	[V]	[mcd] *[mW]	[mcd] *[mW]	
<i>SOFT ORANGE</i> GaAsP/GaP p-side up Low current	180220	610	2,20	2,50	3,0	5,0	20
	180622	610	1,85	2,00	0,18	0,25	2
<i>SOFT ORANGE</i> AlInGaP/GaAs p-side up	180272	615*	2,10**	2,40**		40,0	10
	180282	615*	2,10**	2,40**		65,0	10
	181272	605*	2,10**	2,40**		40,0	10
	181282	605*	2,10**	2,40**		65,0	10
<i>ORANGE</i> GaAsP/GaP p-side up Low current	190210	635	2,10	2,50	2,0	3,0	20
	190220	635	2,10	2,50	3,0	5,0	20
	190622	635	1,80	2,00	0,18	0,23	2
<i>ORANGE</i> AlInGaP/GaAs p-side up	190282	625*	2,10**	2,40**		55,0	10
<i>ORANGE</i> GaAlAs DH n-side up MDH n-side up	190130	622*/630	1,80	2,10		6,0	20
	190150	635	1,90	2,30		16,0	20
GaP ZnO doped p-side up	191210	700	2,25**	2,50**	0,4	0,6	5
<i>TSN RED</i> GaAsP/GaP p-side up	192220	650	2,05	2,50	3,0	4,0	20
<i>RED</i> GaAlAs DDH n-side up	193150	635*/650	1,85	2,30		26,0	20
<i>RED</i> AlInGaP/GaAs p-side up n-side up	193252	632*	2,10**	2,40**		10,0	10
	193272	632*	2,10**	2,40**		15,0	10
	193282	632*	2,10**	2,40**		25,0	10
	194272	640*	2,10**	2,40**		11,0	10
	194170	655	1,90**	2,30**		20,0	20

** at 20 mA

It is possible to produce different types with gold or aluminium bond pad.

On request most of the dice can also be delivered in the following chip size classes:

Order No.:

1	X	X	X	X	X	X
	Technology, Peak, wavelength		1 = n-on top 2 = p-on top Low current 5 = n-on top 6 = p-on top		Luminous intensity classes	Chip dimensions: 0 ≅ 265 μm +/- 10 μm 1 ≅ 325 μm +/- 10 μm 2 ≅ 235 μm +/- 10 μm 3 ≅ 295 μm +/- 10 μm 4 ≅ 365 μm +/- 10 μm 5 ≅ 255 μm +/- 10 μm 6 ≅ 465 μm +/- 10 μm 7 ≅ 350 μm +/- 10 μm 8 ≅ 700 μm +/- 10 μm 9 ≅ 205 μm +/- 10 μm XL ≅ 960 μm +/- 10 μm XL2 ≅ 1960 μm +/- 10 μm