

IR VCSELs

パッケージ Package	品名 Part name	電気的光学的特性 / Electro-optical characteristics								熱的特性 / Thermal characteristics		絶対最大定格 / Absolute maximum ratings							標準梱包 数量 Standard qty. /Reel	WEB	
		ピーク発光波長 Peak wavelength λ_p Typ.	光出力 Optical output power Po Min. Typ.		応答速度 Response time tr/ tf Typ.	順電圧 Forward voltage VF Typ. Max.		照射角度 Field of illumination (FOI x / y)	指向特性 Spatial distribution	選別電流 Sorting current IF	熱抵抗 [ジャンクション-はんだ付け位置] Thermal resistance [Junction - solder point] Rth(j-s) Typ. Max.	順電流 Forward current IF	パルス順電流 Pulse forward current IFRM #1	ジャンクション温度 Junction temperature Tj	静電耐圧 Electrostatic discharge threshold (HBM) VESD	逆電圧 Reverse voltage VR	動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg			
単位 (Units)		nm	W		ns	V		deg.	-	mA	°C/W	mA	mA	°C	kV	V	°C	°C	pcs.		
L3.5 x W3.5 x H1.225 44.5mg 	UEN1ZEA9 (with Photodiode type)	940	2.4	2.8	1 / 1	2.1	2.5	110 / 85		4,000 (tw=0.3ms)	10	-	2,000	10,000 (tw=0.1ms, duty=1%)	125	2	5	-40~+125	-40~+125	500	
L3.5 x W3.5 x H1.225 44.5mg 	UEN1ZA9	940	2.4	2.8	1 / 1	2.1	2.5	110 / 85		4,000 (tw=0.3ms)	10	-	2,000	10,000 (tw=0.1ms, duty=1%)	125	-	-	-40~+125	-40~+125	500	
L3.5 x W3.5 x H1.225 44.5mg 	UDN1Z54	940	1.6	2.1	1 / 1	2.1	2.6	54 / 43		2,700 (tw=0.3ms)	10	-	2,000	6,000 (tw=0.1ms, duty=1%)	125	-	-	-40~+125	-40~+125	500	

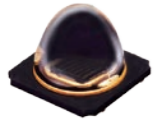
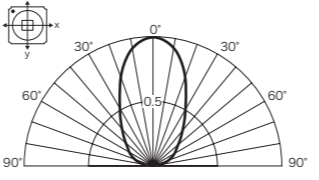
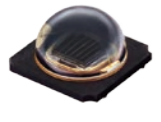
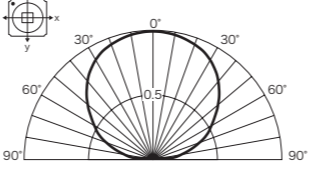
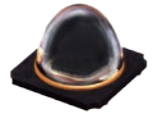
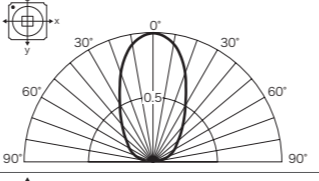
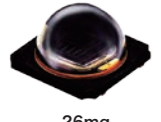
※製品画像は代表的なものです / All pictures shown are for illustration purposes only. Actual product may vary due to product enhancement.
 ※1 駆動条件 / Driving conditions : 0.3ms pulse ※2 駆動条件 / Driving conditions : 0.1ms pulse, 1/100 duty

IR LEDs

パッケージ Package	品名 Part name	電気的光学的特性 / Electro-optical characteristics										熱的特性 / Thermal characteristics		絶対最大定格 / Absolute maximum ratings							標準梱包 数量 Standard qty. /Reel	WEB			
		ピーク発光波長 Peak wavelength λ_p Typ.	放射強度 Radiant intensity Ie Min. Typ.		放射束 Radiant flux ϕ_e Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr/ tf Typ.	順電圧 Forward voltage VF Typ. Max.		指向半値角 Half-intensity angle $2\theta_{1/2}$ (θ_x / θ_y)	指向特性 Spatial distribution	選別電流 Sorting current IF	熱抵抗 [ジャンクション-はんだ付け位置] Thermal resistance [Junction - solder point] Rth(j-s) Typ. Max.	順電流 Forward current IF	順電流低減率 Forward current decrease rate ΔI_F Derating start temp.	パルス順電流 Pulse forward current IFRM #1	パルス順電流低減率 Pulse forward current decrease rate #1 ΔI_{FRM} Derating start temp.	ジャンクション温度 Junction temperature Tj	動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg					
単位 (Units)		nm	mW/sr		mW	MHz	ns	V		deg.	-	mA	°C/W	mA	mA/°C	°C	mA	mA/°C	°C	°C	°C	°C	°C	°C	pcs.
L3.8 x W3.8 x H3.2 34mg 	VMNN110CMS	945	890	1,160	1,700	-	15 / 15	2.9	3.3	45 / 45		1,000	5	7	1,000	-	-	5,000	-	-	145	-40~+125	-40~+125	500	
L3.8 x W3.8 x H1.7 23mg 	VMNN110FMS	945	275	350	1,700	-	-	2.9	3.3	150 / 150		1,000	5	7	1,000	-	-	5,000	-	-	145	-40~+125	-40~+125	500	
L3.8 x W3.8 x H2.8 28mg 	VMHN1107MS	945	620	750	1,630	-	15 / 15	2.9	3.2	60 / 60		1,000	5	7	1,000	-	-	5,000#2	-	-	145	-40~+125	-40~+125	500	
	VMFN1107MS	945	280	440	950	-	15 / 15	1.5	2.1	60 / 60		1,000	5	7	1,000	-	-	5,000	-	-	125	-40~+125	-40~+125	500	
	VMGN1107MS	855	390	530	1,100	-	15 / 15	1.8	2.4	60 / 60		1,000	5	7	1,000	-	-	5,000	-	-	125	-40~+125	-40~+125	500	
L3.8 x W3.8 x H2.8 28mg 	VMKN1107MS	810	390	600	1,100	-	-	3.2	3.7	50 / 50		700	6.5	8.5	700	-	-	2,000	-	-	125	-40~+125	-40~+125	500	
	L3.8 x W3.8 x H2.1 26mg 	VMNN1108MS	945	330	470	1,700	-	15 / 15	2.9	3.3	120 / 120		1,000	5	7	1,000	-	-	5,000	-	-	145	-40~+125	-40~+125	
VMHN1108MS		945	310	420	1,650	-	15 / 15	2.9	3.2	120 / 120		1,000	5	7	1,000	-	-	5,000	-	-	145	-40~+125	-40~+125	500	
VMFN1108MS		945	140	230	950	-	15 / 15	1.5	2.1	120 / 120		1,000	5	7	1,000	-	-	5,000	-	-	125	-40~+125	-40~+125	500	
VMGN1108MS		855	210	280	1,100	-	15 / 15	1.8	2.4	120 / 120		1,000	5	7	1,000	-	-	5,000	-	-	125	-40~+125	-40~+125	500	

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 ※1 駆動条件 / Driving conditions : 0.1ms pulse, 1/100 duty ※2 駆動条件 / Driving conditions : 1.25ms pulse, 1/200 duty, Ts=85°C

IR LEDs

パッケージ Package	品名 Part name	電気的光学的特性/Electro-optical characteristics									熱的特性/Thermal characteristics			絶対最大定格/Absolute maximum ratings					標準梱包 数量 Standard qty. /Reel	WEB														
		ピーク発光波長 Peak wavelength λ_p Typ.	放射強度 Radiant intensity I_e Min. Typ.		放射束 Radiant flux ϕ_e Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr/ta Typ.	順電圧 Forward voltage V_F Typ. Max.		指向半値角 Half-intensity angle $2\theta_{1/2}$ (θ_x/θ_y)	指向特性 Spatial distribution	選別電流 Sorting current I_F	熱抵抗 【ジャンクション-はんだ付け位置】 Thermal resistance [Junction - solder point] $R_{th(j-s)}$ Typ. Max.		順電流 Forward current I_F	パルス順電流 Pulse forward current I_{FRM} ≒1	ジャンクション温度 Junction temperature T_j	動作温度 Operating temperature T_{opr}			保存温度 Storage temperature T_{stg}	単位 (Units)	nm	mW/sr	mW	MHz	ns	V	deg.	-	mA	°C/W	mA	mA
 28mg	MJN1107MS	855	630	840	1,600	-	-	3.2	3.6	60 / 60		1,000	5	7	1,000	3,000	125	-40~+125	-40~+125	500														
	MGN1107MS	855	350	530	1,100	-	15 / 15	1.8	2.4	60 / 60		1,000	5	7	1,500	5,000	125	-40~+125	-40~+125	500														
	MFN1107MS	945	250	440	950	-	15 / 15	1.5	2.1	60 / 60		1,000	5	7	1,500	5,000	125	-40~+125	-40~+125	500														
 26mg	MJN1108MS	855	310	440	1,600	-	-	3.2	3.6	120 / 120		1,000	5	7	1,000	3,000	125	-40~+125	-40~+125	500														
	MGN1108MS	855	190	280	1,100	-	15 / 15	1.8	2.4	120 / 120		1,000	5	7	1,500	5,000	125	-40~+125	-40~+125	500														
	MFN1108MS	945	130	230	950	-	15 / 15	1.5	2.1	120 / 120		1,000	5	7	1,500	5,000	125	-40~+125	-40~+125	500														
 28mg	FWR1107MS	755	270	370	680	-	15 / 15	1.8	2.4	60 / 60		700	5	7	1,000	4,500	125	-40~+125	-40~+125	500														
 26mg	FWR1108MS	755	150	200	740	-	15 / 15	1.8	2.4	120 / 120		700	5	7	1,000	4,500	125	-40~+125	-40~+125	500														

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 ※1 駆動条件/Driving conditions : 0.1ms pulse 1/100 duty



ULTRAVIOLET

VISIBLE LIGHT

INFRARED & SENSORS

INFORMATION

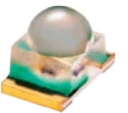
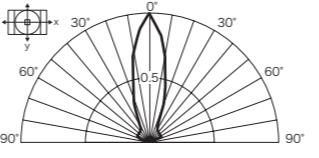

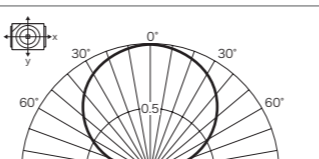

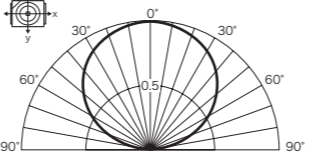
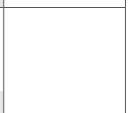
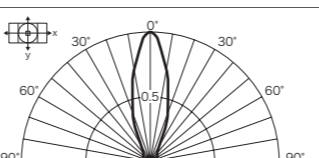

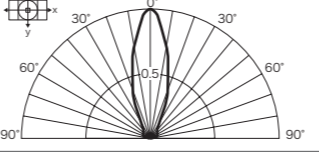

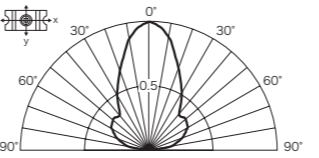

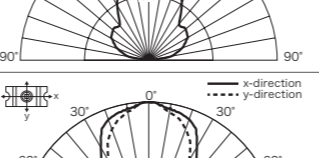

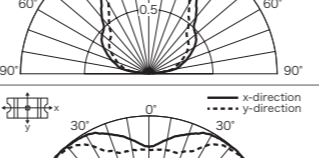

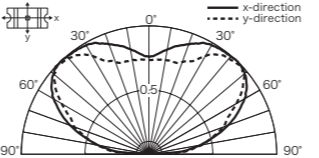


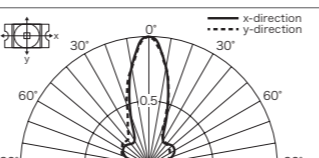

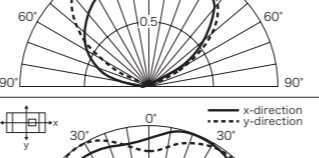

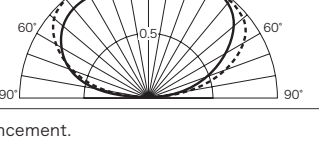
ULTRAVIOLET

VISIBLE LIGHT

INFRARED & SENSORS

INFORMATION

IR LEDs

パッケージ Package	品名 Part name	電気的光学的特性/Electro-optical characteristics									熱的特性/Thermal characteristics		絶対最大定格/Absolute maximum ratings							標準梱包 数量 Standard qty. /Reel	WEB				
		ピーク発光波長 Peak wavelength λ_p Typ.	放射強度 Radiant intensity I_e Min. Typ.		放射束 Radiant flux ϕ_e Typ.	遮断周波数 Cut-off frequency fc Typ.	応答速度 Response time tr/ta Typ.	順電圧 Forward voltage V_f Typ. Max.		指向半値角 Half-intensity angle $2\theta_{1/2}$ (θ_x/θ_y)	指向特性 Spatial distribution	選別電流 Sorting current I_F	熱抵抗 [ジャンクション-はんだ付け位置] Thermal resistance [Junction - solder point] $R_{th(j-s)}$ Typ. Max.	順電流 Forward current I_F	順電流低減率 Forward current decrease rate ΔI_F Derating start temp.		パルス順電流 Pulse forward current I_{FRM} *1	パルス順電流低減率 Pulse forward current decrease rate*1 ΔI_{FRM} Derating start temp.				ジャンクション温度 Junction temperature T_j	動作温度 Operating temperature Topr	保存温度 Storage temperature Tstg	
単位 (Units)		nm	mW/sr		mW	MHz	ns	V		deg.	-	mA	°C/W	mA	mA/°C	°C	mA	mA/°C	°C	°C	°C	°C	pcs.		
 9.0mg	JGN1105H	850	25	50	30	-	13 / 13	1.45	1.65	30 / 30		50	-	-	120	2.40	60	1,200	24	60	-	-40~+100	-40~+100	2,000	
	JFN1105H	950	22.5	45	27	-	13 / 13	1.35	1.65	30 / 30		50	-	-	120	2.40	60	1,200	24	60	-	-40~+100	-40~+100	2,000	
 33mg	JGN1104LS	850	5	9.2	35	-	13 / 13	1.5	1.75	120 / 120		50	110	-	100	2.86	85	1,000	28.6	85	120	-40~+100	-40~+120	2,000	
	JFN1104LS	950	5	8.5	31	-	13 / 13	1.35	1.65	120 / 120		50	110	-	100	2.86	85	1,000	28.6	85	120	-40~+100	-40~+120	2,000	
 7.81mg	TDN1105W-23	870	5.6	11	8.0	50*2	-	1.4	1.65	30 / 30		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	2,000	
	TAN1105W	940	2.4	4.8	5.7	0.5*3	1,000/1,000	1.22	1.37	30 / 30		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	2,000	
 7.8mg	HDN1102W	850	2.2	3.2	8.5	20*2	-	1.45	1.8	60 / 60		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	2,500	
	HAN1102W-1	940	0.7	1	5.7	0.5*3	1,000 / 1,000	1.2	1.4	75 / 90		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	2,500	
 7.8mg	TDN1101W	870	0.6	1.2	8.5	50*2	-	1.4	1.7	135 / 145		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	2,500	
 1.4mg	VTAN1116P	940	1.8	2.8	5.2	-	1,000 / 1,000	1.25	1.45	40 / 40		20	-	-	50	1.25	60	300	7.5	60	-	-40~+85	-40~+100	3,000	
 1.4mg	TDN1111C	870	1.0	1.3	8.0	50*2	-	1.4	1.7	125 / 125		20	-	-	50	0.67	25	300	4	25	-	-30~+85	-40~+100	4,000	
	VTAN1111C	940	0.64	0.7	4.3	-	1,000 / 1,000	1.22	1.37	145 / 145		20	-	-	50	1.25	60	300	7.5	60	-	-40~+85	-40~+100	4,000	

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 ※1 駆動条件/Driving conditions : 0.1ms pulse 1/100 duty
 ※2 駆動条件/Driving conditions : $I_F=20mA_{DC}+10mA_{P-P}$, -3dB from 1MHz
 ※3 駆動条件/Driving conditions : $I_F=20mA_{DC}+10mA_{P-P}$, -3dB from 0.1MHz