

ELECTRO-OPTICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)
HIGH EFFICIENCY RED

PARAMETER	SYMBOL	HLMP					UNIT	TEST CONDITIONS
		-2300	-2350	-2655	-2670	-2685		
Luminous Intensity	min. I_V	6.0	13	13	13	22	mcd	$I_F=20\text{ mA}$
	typ.	23	45	43	45	80	mcd	$I_F=20\text{ mA}$
	typ.	30	50	50	50	100	mcd	$I_F=60\text{ mA pK, 1:3 D.F.}$
Forward voltage	max. V_F	2.6	2.6	2.6	2.6	2.6	V	$I_F=20\text{ mA}$
	typ.	2.0	2.0	2.0	2.0	2.0		
Peak wavelength	typ. λ_p	630	630	630	630	630	nm	
Dominant wavelength	typ. λ_d	626	626	626	626	626	nm	
Capacitance	typ. C	45	45	45	45	45	pF	$V_F=0, f=1\text{ MHz}$
Reverse voltage	min. V_R	6	6	6	6	6	V	$I_R=100\text{ }\mu\text{A}$
Thermal resistance	typ. θ_{JL}	150	150	150	150	150	$^{\circ}\text{C/W/}$ LED chip	

ELECTRO-OPTICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)
YELLOW

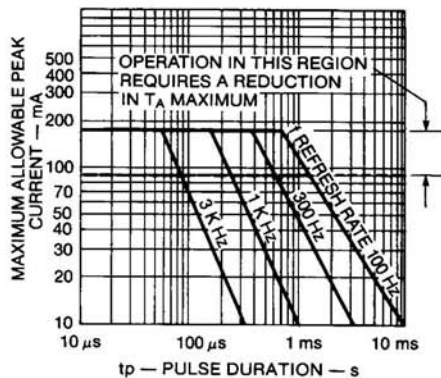
PARAMETER	SYMBOL	HLMP					UNIT	TEST CONDITIONS
		-2400	-2450	-2755	-2770	-2785		
Luminous Intensity	min. I_V	6	13	13	13	26	mcd	$I_F=20\text{ mA}$
	typ.	20	38	35	35	70	mcd	$I_F=20\text{ mA}$
	typ.	33	60	60	60	115	mcd	$I_F=60\text{ mA pK, 1:3 D.F.}$
Forward voltage	max. V_F	2.6	2.6	2.6	2.6	2.6	V	$I_F=20\text{ mA}$
	typ.	2.1	2.1	2.1	2.1	2.1		
Peak wavelength	typ. λ_p	585	585	585	585	585	nm	
Dominant wavelength	typ. λ_d	588	588	588	588	588	nm	
Capacitance	typ. C	35	35	35	35	35	pF	$V_F=0, f=1\text{ MHz}$
Reverse voltage	min. V_R	6	6	6	6	6	V	$I_R=100\text{ }\mu\text{A}$
Thermal resistance	typ. θ_{JL}	150	150	150	150	150	$^{\circ}\text{C/W/}$ LED chip	

ELECTRO-OPTICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)
HIGH EFFICIENCY GREEN

PARAMETER	SYMBOL	HLMP					UNIT	TEST CONDITIONS
		-2500	-2550	-2855	-2870	-2885		
Luminous Intensity	min. I_V	5	11	11	11	22	mcd	$I_F=20\text{ mA}$
	typ.	25	50	50	50	100	mcd	$I_F=20\text{ mA}$
	typ.	38	75	75	75	150	mcd	$I_F=60\text{ mA pK, 1:3 D.F.}$
Forward voltage	max. V_F	2.6	2.6	2.6	2.6	2.6	V	$I_F=20\text{ mA}$
	typ.	2.2	2.2	2.2	2.2	2.2		
Peak wavelength	typ. λ_p	565	565	565	565	565	nm	
Dominant wavelength	typ. λ_d	567	567	567	567	567	nm	
Capacitance	typ. C	40	40	40	40	40	pF	$V_F=0, f=1\text{ MHz}$
Reverse voltage	min. V_R	6	6	6	6	6	V	$I_R=100\text{ }\mu\text{A}$
Thermal resistance	typ. θ_{JL}	150	150	150	150	150	$^{\circ}\text{C/W/}$ LED chip	

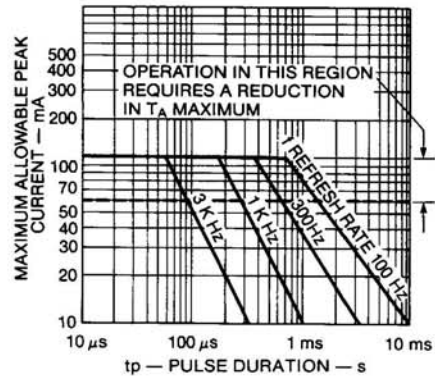
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

(25°C Free Air Temperature Unless Otherwise Specified)



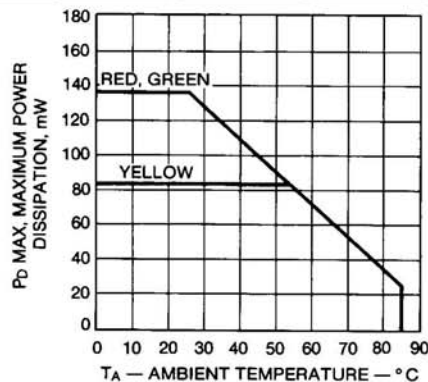
C2013

Fig. 1. Maximum Tolerable Peak Current per LED Chip vs. Pulse Duration for HLMP-23X0/-26XX/-25X0/-28XX



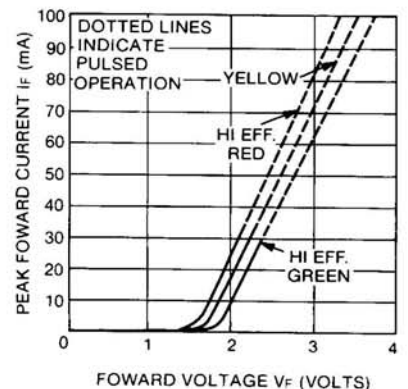
C2014

Fig. 2. Maximum Tolerable Peak Current per LED Chip vs. Pulse Duration for HLMP-24X0/-27XX Devices



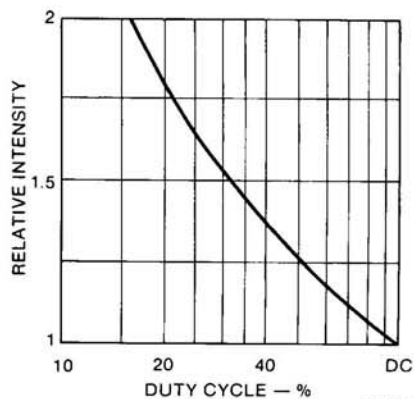
C2025

Fig. 3. Maximum Power Dissipation per LED vs. Ambient Temperature



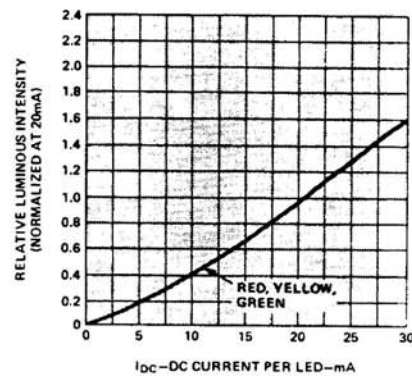
C1833A

Fig. 4. Forward Current vs. Forward Voltage



C1194C

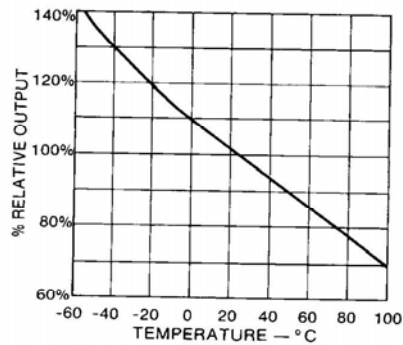
Fig. 5. Luminous Intensity vs. Duty Cycle



C3077

Fig. 6. Luminous Intensity vs. Forward Current

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (25°C Free Air Temperature Unless Otherwise Specified) (Cont'd)



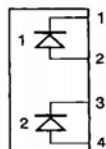
C654B

Fig. 7. Output vs. Temperature

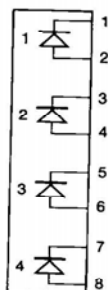
PIN CONNECTIONS TO ELECTRICAL SCHEMATIC

PIN	ELECTRICAL CONNECTION			
	HLMP-2X00	HLMP-2X50	HLMP-2X55	HLMP-2X70/-2X85
1	1 Cathode	1 Cathode	1 Cathode	1 Cathode
2	1 Anode	1 Anode	1 Anode	1 Anode
3	2 Cathode	2 Cathode	2 Anode	2 Anode
4	2 Anode	2 Anode	2 Cathode	2 Cathode
5		3 Cathode	3 Cathode	3 Cathode
6		3 Anode	3 Anode	3 Anode
7		4 Cathode	4 Anode	4 Anode
8		4 Anode	4 Cathode	4 Cathode
9				5 Cathode
10				5 Anode
11				6 Anode
12				6 Cathode
13				7 Cathode
14				7 Anode
15				8 Anode
16				8 Cathode

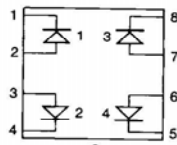
ELECTRICAL SCHEMATIC



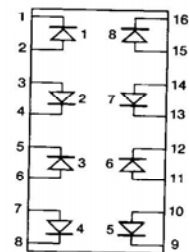
HLMP - 2X00



HLMP - 2X50



HLMP - 2X55



HLMP - 2X70

C2016



LED LIGHT BARS

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