

LASER DIODE OUTPUT WAVEFORMS

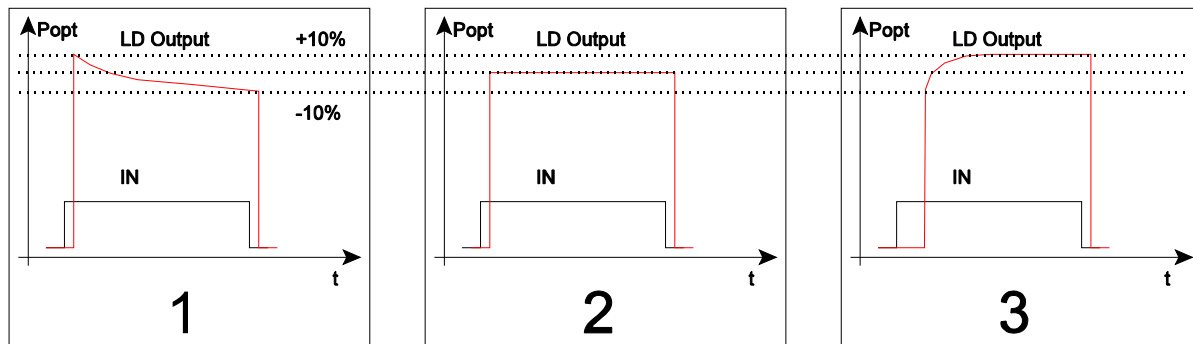


Fig. 1: the lowest operating frequency permitted is determined by a limit of 10% max. overshooting

Fig. 2: setup ok, the time constant given by RSET x CI suits the operating frequency ideal

Fig. 3: switch delay on leading edge starts to effect the duty cycle and thus the pulse power

TYPICAL OPERATIONAL CHARACTERISTICS (taken on iC-WJ)

Operating Conditions: VCC= 5V, Tj= 25°C, unless otherwise noted

Item	Symbol	Parameter	Conditions	Tj °C	Fig.				Unit	
						Min.	Typ.	Max.		
CW Operation (IN= VCC)										
1	ton()	Power-on Delay	CI, RSET, CWD: 22nF, 15k, -pF				0.54			ms
2			470nF, 15k, 100pF				11			ms
3			4.7µF, 15k, 1000pF				120			ms
Operating Frequency (50% duty cycle)										
4	f(IN)	Clock Frequency at IN	CI, RSET, CWD: 100nF, 15k, -pF		1		65			kHz
5			see #4		2		150			kHz
6			see #4		3		400			kHz
7			220nF, 15k, -pF		1		30			kHz
8			see #7		2	120	150	250		kHz
9			see #7		3		400			kHz
10			470nF, 15k, 100pF		1		10			kHz
11			see #10		2	60	100	250		kHz
12			see #10		3		400			kHz
13			4.7µF, 15k, 1000pF		1		1.8			kHz
14			see #13		2	30	100	250		kHz
15			see #13		3		350			kHz

iC-WJ, iC-WJZ

APPLICATION NOTES



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TYPICAL OPERATIONAL CHARACTERISTICS (taken on iC-WJ)

Operating Conditions: VCC= 5V, Tj= 25°C, unless otherwise noted

Item	Symbol	Parameter	Conditions	Tj °C	Fig.				Unit
						Min.	Typ.	Max.	
Operating Frequency (25% duty cycle)									
16	f(IN)	Clock Frequency / Pulse Width at IN	470nF, 50k, - pF		1		40 6.2		kHz µs
17			see #16		2	50	5	80	kHz µs
18			see #16		3		100 2.5		kHz µs
Operating Frequency (10% duty cycle)									
19	f(IN)	Clock Frequency / Pulse Width at IN	1µF, 100k, 1nF		1		5 10		kHz µs
20			see #19		2	10	5	30	kHz µs
21			see #19		3		50 2		kHz µs
Laser Diode Power Delay									
22	tp(LD)on	Light Power Delay	IN: lo⇒hi until 90% Popt				230		ns
23	tp(LD)off		IN: hi⇒lo until 10% Popt				90		ns

