

LASER DIODE OUTPUT WAVEFORMS

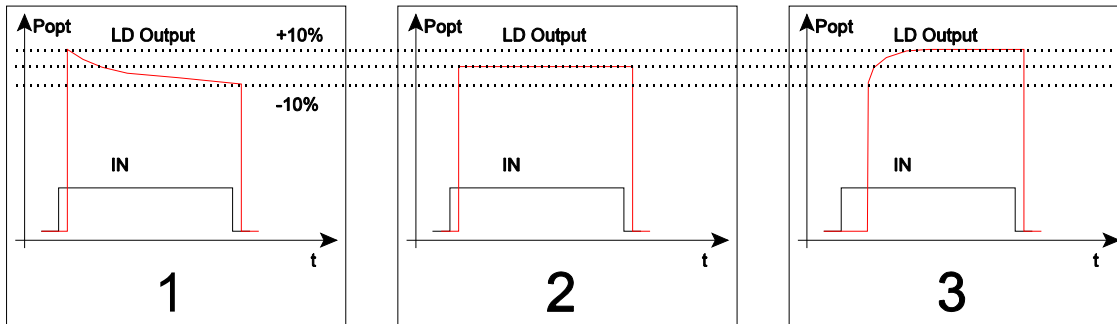


Fig. 1: the lowest operating frequency permitted is determined by a limit of 10% max. overshooting

Fig. 2: setup ok, the time constant given by $RSET \times CI$ 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: $VCC = 5V$, $T_j = 25^\circ C$, 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

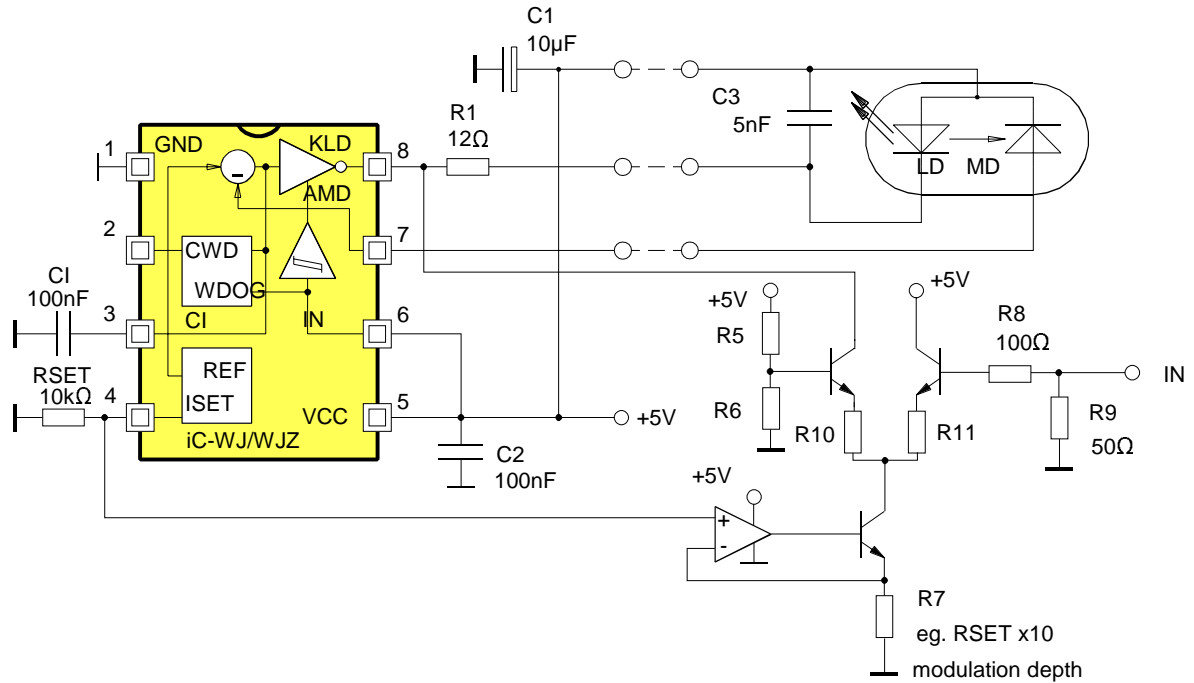


Fig. 1: applying external HF modulation

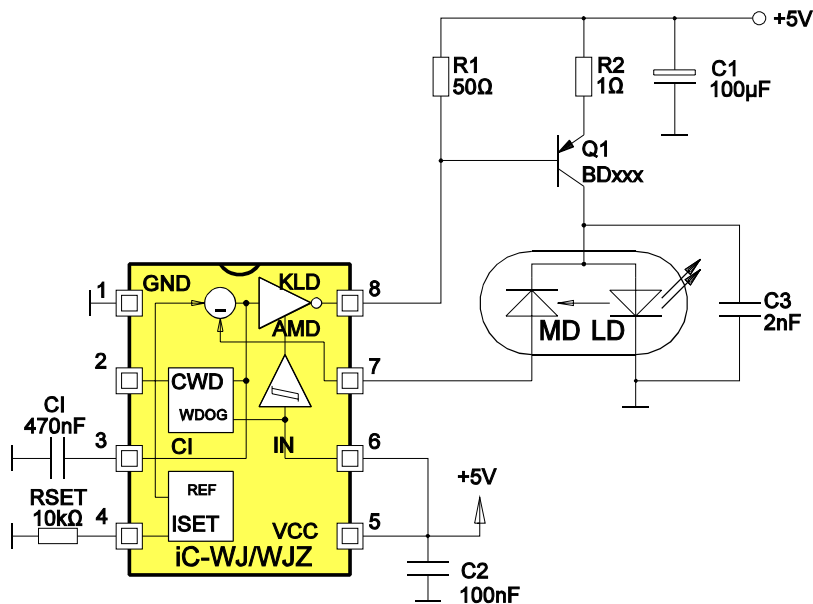


Fig. 2.: supplying higher output currents