

Searchlight signal driver (SSD) parts list.

(In recommended order of assembly)

Qty.	Symbol	Description
4	-	4-40 nuts (Digi-Key H216)
4	-	4-40 x 1/4-long pan head machine screws (Digi-Key H142)
1	J1	Jumper, make from no. 24 uninsulated bus wire (Belden no. 8022)
3	R1-R3	100K Ω resistors [brown-black-yellow]
4	R4-R7	1.0K Ω resistors [brown-black-red]
1	R8	6.8K Ω resistors [blue-gray-red]
1	R9	15K Ω resistor [brown-green-orange]
1	R10	18K Ω resistor [brown-gray-orange]
2	R11	13K Ω resistor [brown-orange-orange]
3	D1-D3	1A, 100V fast recovery diodes (Digi-Key 1N4934CT)
1	S1	14-pin DIP socket (Jameco 112213)
1	C1	1.0 μ F, 35V tantalum capacitor (Jameco 33662)
1	C2	.1 μ F monolithic capacitor (Jameco 332671)
1	P1*	50K Ω potentiometer (Digi-Key 3306F-503)
1	U1	LM324N quad op amp (Jameco 23683)

Select one of the following three options to complete card assembly:

If using circuit for 2-lead bi-color LED without separate red and green tweaking, install:

1	D4	Do not install, leave open circuit
1	D5	Install jumper in place of diode
1	R12	Do not install, leave open circuit
1	R13	390 Ω resistor [orange-white-brown]
1	R14	Install jumper in place of resistor

If using circuit for 2-lead bi-color LED with separate red and green tweaking, install:

2	D4, D5	1A, 100V fast recovery diodes (Digi-Key 1N4934CT)
1	R12	470 Ω resistor [yellow-violet-brown] (adjust to change red intensity)
1	R13	390 Ω resistor [orange-white-brown] (adjust to change green intensity)
1	R14	Install jumper in place of resistor

If using circuit for 3-lead bi-color LED, then install:

1	D4	Install jumper in place of diode
1	D5	Do not install, leave open circuit
1	R12	470 Ω resistor [yellow-violet-brown] (adjust to change red intensity)
1	R13	Do not install, leave open circuit
1	R14	390 Ω resistor [orange-white-brown] (adjust to change green intensity)

*Use potentiometer P1 built into the SSD card to adjust the quality of yellow aspect.

Above quantities are per signal LED. Multiply by 12 to assemble total card (12 signal LEDs). Also, add in two additional nuts and screws, per card, for power supply connections.

Author's recommendations for suppliers given in parentheses above with part numbers where applicable. Equivalent parts may be substituted. Resistors are 1/4W, 5 percent with color codes given in brackets.