

Bill of Materials	
Project:	Photoelectric Infrared Sensor
Author:	Marko Vulovic
Date:	December 8, 2024
Version:	1.0

Costs for 1 boards:		€ 24,92
Costs for 10 boards:		€ 179,14
Costs for 100 boards:		€ 1 585,00

#	Ref	Description	Qty	Pkg Type	Manufacturer	Distributor
1	T_R1	Resistor, 15k	1	Cut Tape/Mouse Reel	Panasonic	Mouser
2	T_R2	Resistor, 2k7	1	Cut Tape/Mouse Reel	Panasonic	Mouser
3	T_R3	Resistor, 330	1	Cut Tape/Mouse Reel	Panasonic	Mouser
4	T_R4	Resistor, 47,1W	1	Cut Tape/Mouse Reel	Panasonic	Mouser
5	T_C1	Ceramic capacitor, 15n	1	Cut Tape/Mouse Reel	Kyocera	Mouser
6	T_C2	Electrolytic capacitor, 10u/16V	1	Cut Tape/Mouse Reel	Wurth Elektronik	Mouser
7	T_D1,T_D2	LED, SFH4851	2	Ammo Pack	ams OSRAM	Mouser
8	T_P1	Trimmer Potentiometer, 10k	1	Cut Tape/Mouse Reel	Bourns	Mouser
9	T_T1	PNP Transistor, BD136	1	Ammo Pack	STMicroelectronics	Mouser
10	T_IC1	CMOS Timer, TLC555	1	Cut Tape/Mouse Reel	Texas Instruments	Mouser
11	R_R1	Resistor, 6k8	1	Cut Tape/Mouse Reel	Panasonic	Mouser
12	R_R2	Resistor, 3k3	1	Cut Tape/Mouse Reel	Panasonic	Mouser
13	R_R4	Resistor, 1k8	1	Cut Tape/Mouse Reel	Panasonic	Mouser
14	R_R5	Resistor, 10k	1	Cut Tape/Mouse Reel	Panasonic	Mouser
15	R_R6	Resistor, 1Meg	1	Cut Tape/Mouse Reel	Panasonic	Mouser
16	R_R7	Resistor, 100k	1	Cut Tape/Mouse Reel	Panasonic	Mouser
17	R_R8	Resistor, 1k	1	Cut Tape/Mouse Reel	Panasonic	Mouser
18	R_R9	Resistor, 4k7	1	Cut Tape/Mouse Reel	Panasonic	Mouser
19	R_R10	Resistor, 470k	1	Cut Tape/Mouse Reel	Panasonic	Mouser
20	R_R13	Resistor, 2k2	1	Cut Tape/Mouse Reel	Panasonic	Mouser
21	R_C1	Ceramic capacitor, 10n	1	Cut Tape/Mouse Reel	Kyocera	Mouser
22	R_C2	Ceramic capacitor, 47p	1	Cut Tape/Mouse Reel	Kyocera	Mouser
23	R_C4	Ceramic capacitor, 220n	1	Cut Tape/Mouse Reel	Kyocera	Mouser
24	R_C5	Ceramic capacitor, 22n	1	Cut Tape/Mouse Reel	Kyocera	Mouser

25	R_C6	Electrolytic capacitor, 2u2/10V	1	Cut Tape/Mouse Reel	Würth Elektronik	Mouser
26	R_C7	Electrolytic capacitor, 4u7/10V	1	Cut Tape/Mouse Reel	Panasonic	Mouser
27	R_C8	Ceramic capacitor, 47n	1	Cut Tape/Mouse Reel	Kyocera	Mouser
28	R_C9, R_C10	Ceramic capacitor, 100n	2	Cut Tape/Mouse Reel	Kyocera	Mouser
29	R_C11	Electrolytic capacitor, 22u/10V	1	Cut Tape/Mouse Reel	Panasonic	Mouser
30	R_D1	LED, BPW34	1	Cut Tape/Mouse Reel	ams OSRAM	Mouser
31	R_T1,R_T2	NPN Transistor, BC549C	2	Ammo Pack	Diotec Semiconductor	Mouser
32	R_IC1	Tone decoder, LMC567	1	Cut Tape/Mouse Reel	Texas Instruments	Mouser
33	R_IC2	Oscillator, NE555	1	Cut Tape/Mouse Reel	Texas Instruments	Mouser
34	R_BZ1	Piezo buzzer transducer	1	Cut Tape/Mouse Reel	Same Sky	Mouser
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Order No.	Bulk Ordering Price			Availability	Link	Second Source
	1	10	100			
667-ERJ-UP6D1502V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D2701V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D3300V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-U1TF47R0U	€ 0,4750	€ 0,2760	€ 0,1790	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
581-0402YC153KAT2A	€ 0,0950	€ 0,0270	€ 0,0130	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
710-865090368008	€ 0,2950	€ 0,2760	€ 0,2560	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
720-SFH4851	€ 4,8500	€ 3,4300	€ 3,2500	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
81-PVG5A103C03R00	€ 2,7800	€ 1,9400	€ 1,6500	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
511-BD136	€ 0,2280	€ 0,1850	€ 0,1640	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
595-TLC555QDRG4	€ 0,7980	€ 0,6990	€ 0,5360	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://at.farnell.com/t/">https://at.farnell.com/t/</a>
667-ERJ-UP6D6801V	€ 0,2470	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D3301V	€ 0,2850	€ 0,2480	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D1801V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D1002V	€ 0,2850	€ 0,2480	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D1004V	€ 0,2850	€ 0,2480	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D1003V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
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667-ERJ-UP6D4703V	€ 0,2470	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
667-ERJ-UP6D2201V	€ 0,2950	€ 0,2460	€ 0,2250	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
581-KAM05AR71E103KH	€ 0,0950	€ 0,0480	€ 0,0240	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
581-04023A470KAT2A	€ 0,0950	€ 0,0580	€ 0,0570	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
581-KGM05AR71C224KH	€ 0,0950	€ 0,0440	€ 0,0220	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>
581-0402YC223K	€ 0,0950	€ 0,0270	€ 0,0130	yes	<a href="https://www.mouser.at/Proc">https://www.mouser.at/Proc</a>	<a href="https://www.digikey.at/">https://www.digikey.at/</a>

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## Notes

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[/de/products/detail/ams-osram-usa-inc/BPW-34-FAS-Z/9468210?s=N4lgTCBcDaIAQCEAKB1OBmALHAYgQQGUBaALRAF0BfIA](https://www.ams-osram.com/de/products/detail/ams-osram-usa-inc/BPW-34-FAS-Z/9468210?s=N4lgTCBcDaIAQCEAKB1OBmALHAYgQQGUBaALRAF0BfIA)

[/de/products/detail/diotec-semiconductor/BC549C/22192148](#)

Bought LMC567, because NE567 is obsolete

[/de/products/detail/texas-instruments/NE555PSR/372493](#)

[/de/products/detail/same-sky-formerly-cui-devices/CPT-1203-03-SMT-TR/25577244?s=N4IgTCBcDaIAQGEAKAVaArjABgMxrzQGUBZdFAJRAF0BflA](https://de/products/detail/same-sky-formerly-cui-devices/CPT-1203-03-SMT-TR/25577244?s=N4IgTCBcDaIAQGEAKAVaArjABgMxrzQGUBZdFAJRAF0BflA)

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