INPUT Pulse length should be greater than 1 ms (margin included). This is due to RC filtering to avoid unwanted beamswitches.

Calculation:
V_{trigger}=1.67V \ (going \ below \ 1.67V \ triggers \ IC)
Thevenin equivalent circuit:
V_{open}=5K/(100K + 5K) \times 5V = 238mV
Is homic circuit=5V/100K=50uA
R_{th}=V_{open}/I_{shortcircuit}=4.76k
RC=4.76k\times 0.1\mu F=476\mu s
V(t)=238\mu V(1-e^{-t/476}\mu s) + 5e^{-t/476}\mu s
So, for a trigger of 1.67V, t=0.522ms

OUTPUT Pulse length should be greater than 200 ms.
Pulse length=1.1 \times R1 \times C2 = 242ms

Pulse length=1.1 \times R4 \times C4 = 242ms

CAUTION:
- Do NOT use 5V 74HC14 parts. Use only 15V tolerance parts.
- 74HC14 uses "AGND" because that is the same power and GND used by amplifiers.