# Minicast Package
# Window Size in Front of the IR Receiver Module

The window in front of the receiver should be sized in order to optimize the required viewing angle. A formula to calculate the optimal window size, given the required viewing angle, is presented below.

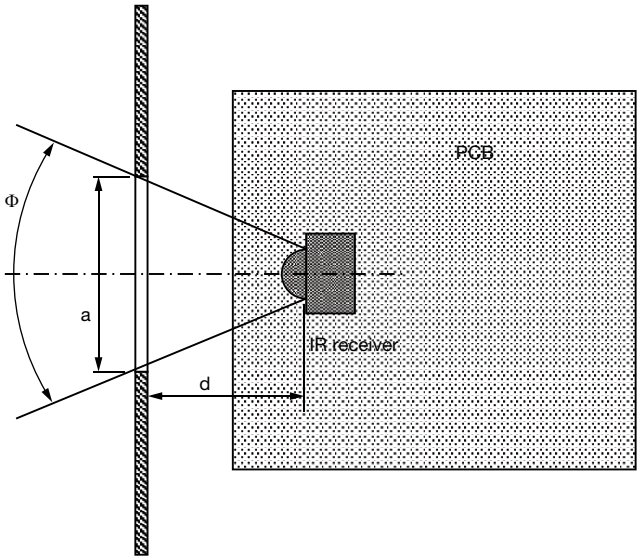


Fig. 1

a: window size

d: distance between bottom of the lens and the window

Φ: required total viewing angle. If the required viewing angle is ± 50°, Φ would be 100°

The minimum window size is:

$$a = 4\ mm + 2d\ \tan\left(\frac{\Phi}{2}\right)$$

**Example:**

Receiving angle should be ± 50°, distance between window and IR receiver is 5 mm. In that case the window size should be:

a = 4 mm + 2 x 5 mm x 1.19 = 15.9 mm

If the window size must be small then a light guide may be helpful to span the distance between front panel and IR receiver. There is some loss of optical power at the connection between IR receiver and light guide.

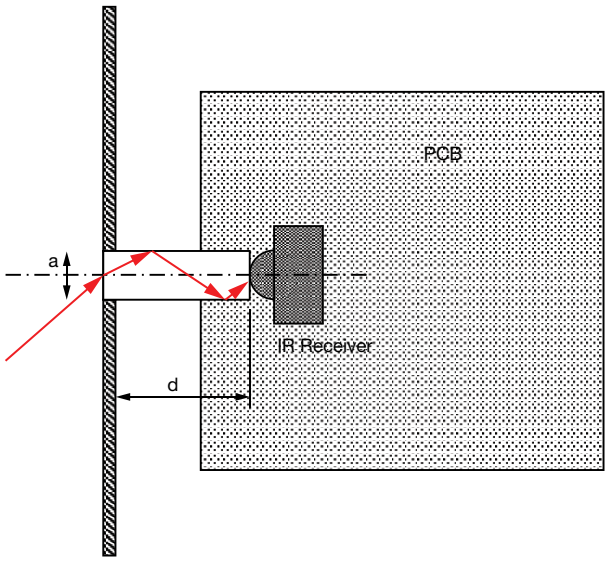


Fig. 2

a: diameter of light guide

b: length of light guide

We recommend a diameter of about 4 mm and a length of at least 12 mm for the optimum efficiency of the light guide.