

lifetimes
(in hours)

Frequency

0 - 20	10
20 - 40	35
40 - 60	52
60 - 80	61
80 - 100	38
100 - 120	29

f_0
 f_1
 f_2

Maximum frequency

Modal class 60 - 80

$$l = 60$$

$$h = 20$$

$$\text{Mode} = l + \frac{f_1 - f_0}{2f_1 - f_0 - f_2} \times h$$

$$= 60 + \frac{61 - 52}{122 - 52 - 38} \times 20$$

$$= 60 + \frac{9}{122 - 90} \times 20$$

$$= 60 + \frac{9}{32} \times 20$$

$$= 60 + \frac{45}{8}$$

$$= 60 + 5.625$$

$$= 65.625$$

Modal lifetime = 65.625 hours