

2.7 High Pressure Sodium

The high pressure sodium lamp generates light in a discharge through sodium vapour at high pressure. As the vapour pressure of sodium in a lamp rises the spectrum at first broadens and then it splits in two with a gap appearing at about 586 nm. Figure 56 shows the spectrum of a high pressure sodium lamp.

As the vapour pressure rises the colour rendering of the lamp increases. However, this is at the expense of efficacy in terms of lumens per watt. Figure 55 shows the construction of a high pressure sodium lamp.

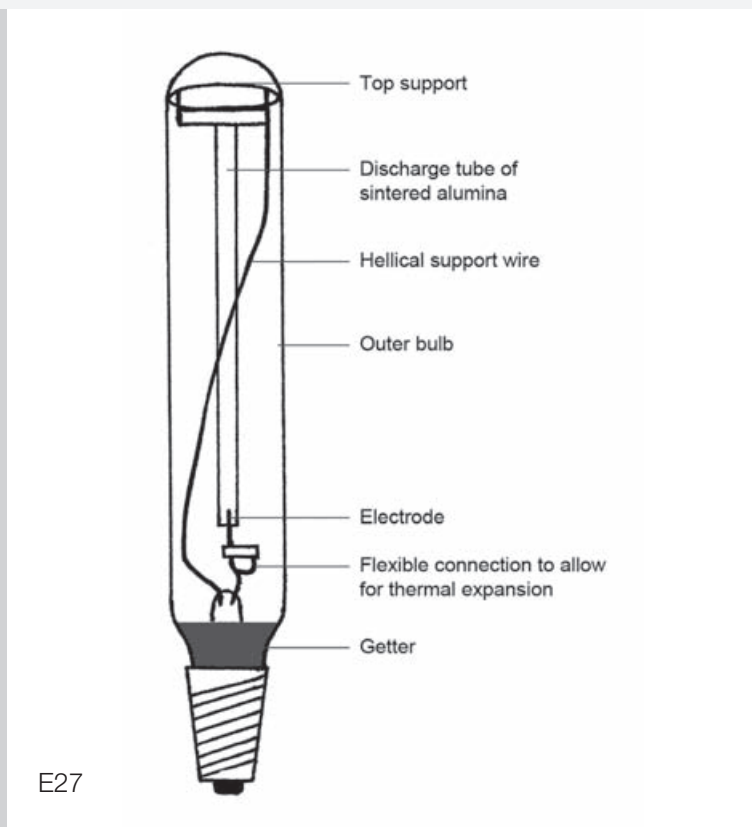
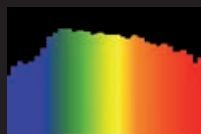


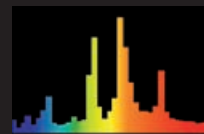
Figure 55
Typical high pressure sodium E27 system construction.



Figure 57
Typical high pressure sodium lamp E27 socket.



Daylight



High Pressure Sodium (orange-yellow)

Figure 56
Typical spectral light distribution of high pressure sodium lamp in comparison to daylight spectrum.