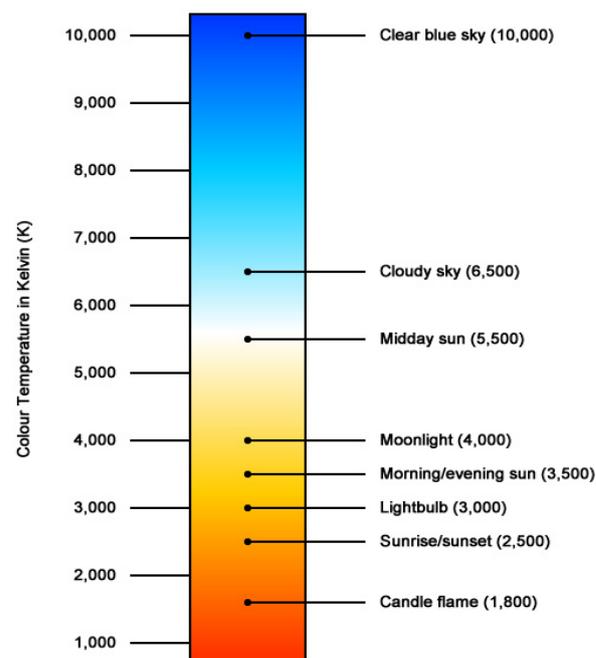


Understanding Colour Temperature

With the advent of LED's there are new terms in lighting that are becoming more and more a part of our daily vocabulary. Terms such as 'colour temperature,' 'warm white,' or 'cool white' were rarely used in the era of conventional lighting since choice in these matters was limited.

With LED's however, it has become possible to choose whatever colour temperature suits our needs or preferences.

So, what do we mean by colour temperature? Essentially it is a scale that measures the spectrum of a light source. The warmer the light the more red is in the spectrum. The cooler the light the more blue is present. It is measured in Kelvins (abbreviated to K), and the higher the number, the 'cooler' the light. The lower the number, the 'warmer' the light.



Generally LED lights are manufactured in the range 2400K to 6500K. Different colour temperatures are achieved by altering the makeup of the LED diodes used. This flexibility has provided the poultry industry with the ability to fine tune our choice of lights according to the needs of our birds.

It is widely accepted that the optimum colour temperatures for poultry are 5000K for commercial growing birds or 2700K for breeder and egg laying birds.

5000K contains more blue light which research has indicated helps to promote growth and relieve stress leading to better performance and reduced FCR's.

2700K contains more red light which has a promotional effect on sexual development, egg production and egg quality.

More recently we have seen the emergence of 'full spectrum' LED's which include UVA light. Unlike humans, poultry can see UV light and early research suggests that its presence has further benefits on welfare, perhaps as a consequence of how birds see and interact with each other.

It is worth mentioning that LED lights for poultry must be flicker-free to realise the full benefits of choosing the correct colour temperature (see TES No 1).

At Gallina LED we would be happy to advise you on which colour temperature best suits your birds. Colour switching options are also available if you would like even greater control.

LED: Improve Performance, Improve Welfare, Save Energy!