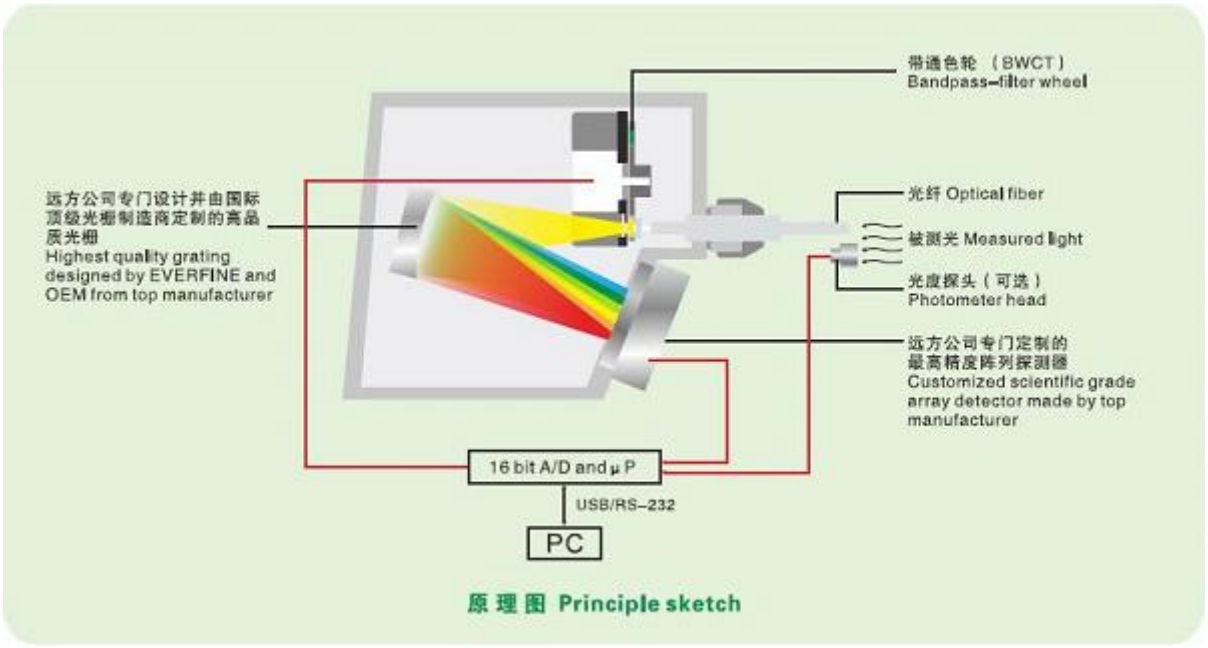
PCE系列 light bar灯条光色电综合测试系统
PCE series light bar light color electricity comprehensive test system

- 用于测试单颗LED、LED/LED背光源、等的相对光谱分布、色品坐标、主波长、峰值波长、光谱纯度、色温、显色指数、半宽度、光通量（配积分球），辐射功率、红色比、色容差等参数，可同时实现LED的瞬态光学特性测量（脉冲测量）及稳态光学特性测量（直流测量）。

It is used to test the relative spectral distribution, chromaticity coordinates, dominant wavelength, peak wavelength, spectral purity, color temperature, color rendering index, half width, luminous flux (with integrating sphere), radiation power, red ratio, color tolerance and other parameters of single LED, LED/LED backlight, etc. It can simultaneously realize the measurement of LED's transient optical characteristics (pulse measurement) and steady-state optical characteristics (DC measurement).

技术参数 Specifications

- 基本原理：
  Rationale:



原理图 Principle sketch

技术参数 Specifications

- 低杂散光
  通过改良设计后高度匹配度的高精度光栅和科学级制冷型阵列探测器，并利用BWCT技术和杂散光校正技术，HAAS-2000的杂散可以比原有高精度 快速光谱仪的十分之一还要低。
  Low stray light
  The stray of HAAS-2000 can be lower than one tenth of that of the original high-precision fast spectrometer by improving the design of high-precision grating with high matching degree and scientific refrigeration array detector, and using BWCT technology and stray light correction technology.

- 宽线性动态测量范围
  与普通阵列探测器相比，HAAS-2000中的科学级阵列探测器具有更宽的线性动态范围，且光学匹配改造设计后，仪器的动态范围进一步拓宽。此外，SBCT技术也大辐提高了HAAS-2000的线性动态范围。
  Wide linear dynamic measurement range
  Compared with the ordinary array detector, the scientific array detector in HAAS-2000 has a wider linear dynamic range, and the dynamic range of the instrument is further widened after the optical matching design. In addition, SBCT technology also greatly improves the linear dynamic range of HAAS-2000.

- 快速
  HAAS-2000不仅可以测量光源的稳态特性，而且可以测量它们瞬态光学特性，完全符合相关标准的规定。在仪器的灵敏度范围内，无论被测光的瞬态脉冲多快（如小于微秒级），仪器均可以通过同步触发功能实现快速的全光谱测量。HAAS-2000采用科学级阵列探测器代替机械扫描系统，可以在较短的测量时间内（毫秒级）完整完成精确测量整个光谱范围 。
  Fast
  HAAS-2000 can not only measure the steady state characteristics of light sources, but also measure their transient optical characteristics, which fully conforms to the provisions of relevant standards. Within the sensitivity range of the instrument, no matter how fast the transient pulse of the measured light is (such as less than microseconds), the instrument can achieve rapid full spectrum measurement through the synchronous trigger function. HAAS-2000 adopts scientific array detector instead of mechanical scanning system, which can completely and accurately measure the whole spectrum range in a short measurement time (millisecond level).

- 高精度
  HAAS-2000专为高精度应用场合设计，通过对优质商用科学级制冷型阵列探测器和精密光栅进行改良设计，使其更加匹配，再配以精密的光学系统和电子 线路，同时采用多项专利技术，整个系统可以实现高分辨率、高灵敏度、低噪声、低杂散光和宽动态范围，从而实现精确测量的目的。
  High precision
  HAAS-2000 is specially designed for high-precision applications. By improving the design of high-quality commercial scientific grade refrigeration array detector and precision grating, it can be more matched, coupled with precision optical system and electronic circuit. At the same time, it adopts a number of patented technologies. The whole system can achieve high resolution, high sensitivity, low noise, low stray light and wide dynamic range, thus achieving accurate measurement.

- 高重复性和稳定性
  仪器没有机械运动的扫描机构，唯一会产生随环境变化的温度因素也被恒温制冷技术控制到了±0.05℃的水平，测量的重复性和稳定性高。
  High repeatability and stability

- The instrument has no scanning mechanism with mechanical movement, and the only temperature factor that will change with the environment is also controlled to ± 0.05 ℃ by the constant temperature refrigeration technology, with high measurement repeatability and stability.