# Mechanical Product Design Engineer

## Job Description

As a Mechanical Product Design Engineer, you will design, develop, and deploy all the mechanical aspects of CoolLED's sophisticated illumination systems. This role also includes rigorous testing and evaluation of innovative technologies and designs.

This position reports directly to the Engineering Manager.

## About this role

As a Mechanical Product Design Engineer, you will contribute to our Engineering team's success by:

- Designing and developing industry-leading LED illumination systems used in biomedical, academic research and industrial applications.
- CoolLED light sources are fitted by some of the world's leading microscope manufacturers, Leica, Nikon, and Evident (formally Olympus). CoolLED is committed to developing these relationships by pushing the boundary of LED illumination in niche applications.

## How do you make an impact?

As a Mechanical Product Design Engineer at CoolLED, you will be pivotal in shaping the future of innovative life science and inspection technologies. Our innovative products are making a global impact, and your expertise will be instrumental in enhancing our product offering. You will thrive in a collaborative and supportive team environment where you will have the autonomy to drive impactful solutions.

## Ideal candidates will possess…

*Required Skills*

- **Strong academic foundation:** Bachelor's degree in mechanical engineering, Product Design, or Industrial Design.
- **CAD** Packages: Autodesk inventor, SolidWorks or similar
- **Data Management** packages i.e. Autodesk Vault or SolidWorks PDM
- **Experience in low volume production techniques**. Sheet Metal, CNC matching (non-essential must just demonstrate skills in understanding manufacturing techniques).
- Understand and able to apply **GD&T** (Geometric Dimensioning and Tolerancing)
- Proven complete physical product development from concept to manufacture (not looking for a general mech engineer that develops industrial equipment, plant, or structural elements)
- Proven experience working with standards and Quality systems.
- Good data hygiene, recording and management.
- Demonstrated product testing and analysis.
- FEA (Finite Element Analysis) Theoretical. No simulation but simulation experience beneficial.
- FMEA (Failure Mode and Effects Analysis)
- DFM (Design for Manufacture) and DFA (Design for Assembly)
- Demonstrate engineering calculations, applied maths and engineering problem solving.
- Technical drawings.
- Analysing tolerance stacks and assembly level engineering skills – i.e. how things work as a whole.
- Strong User Centred Design principles and methodologies
- Consulting with Manufacturing partners
- Project management skills
- Self-starter that has initiative to drive projects forward
- Demonstrate product testing and evaluation.
- Demonstrate experiment design and setup.
- Demonstrate Material science understanding.
- Good decision making and ownership skills.

*Beneficial Skills*

- PFMA (Process Failure Mode and Effects Analysis)
- Presenting and communicating Data effectively
- Experience in presentation renderings (Fusion 360 – or have used rendering programs in the past)
- Adobe suite – Illustrator, InDesign, Photoshop
- Industrial design skills looking at aesthetics and CMF (Colours, Materials and Finishes)
- Knowledge of electronic principles, electro mechanics and product integration with software

This position is based at our headquarters in Andover. Staff are expected to be willing to travel as their role requires to visit customers and partners worldwide.

## CoolLED's Mission

**To advance science and industry with cutting-edge, solid-state illumination systems that transform optical inspection and imaging research to better people's lives**

## Our Values

**Ambitious**

in what we plan to achieve

**Committed**

to deliver our ambitious plans

**Supportive**

of our customers, each other and the environment

**Innovative**

in how we solve challenges