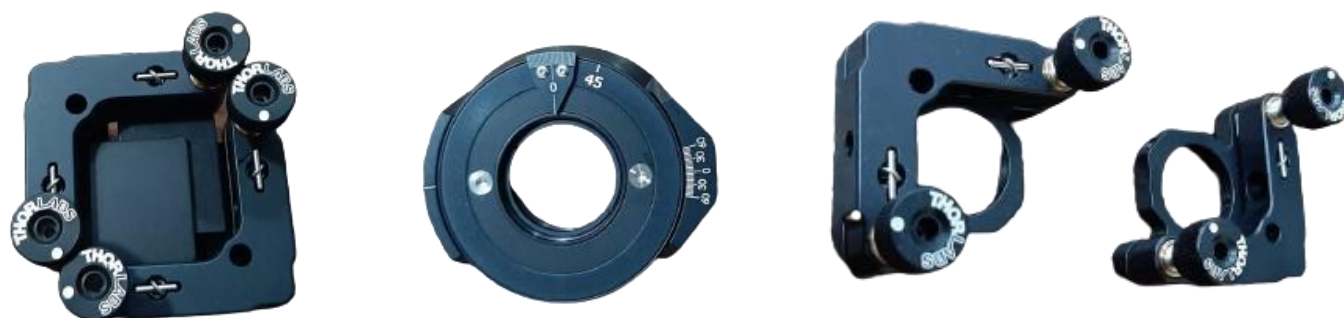


## Quantum Cryptography Analogy Demonstration Kit



The EDU-QCRY1(/M) Quantum Cryptography Analogy Demonstration Kit contains components to model a data transmission setup using the BB84 encryption protocol. This encryption method allows a sender and receiver to generate an encryption key that only they know and eavesdroppers to be detected. In this analogy experiment, the polarization of transmitted light carries bits of information which are manipulated using half-wave plates and polarizing beamsplitters. The educational lab kit includes the lasers, half-wave plates, polarizing beamsplitters, and detectors required to model the sender (Alice), the receiver (Bob) and the eavesdropper (Eve).

This kit is designed to demonstrate the fundamentals of quantum cryptography and the BB84 encryption protocol through a series of classroom experiments. In these experiments, students will learn how to encode messages in binary using the polarization state of light and then encrypt them using the BB84 protocol.



### EXPERIMENTS:

- Learn how information can be encrypted and sent using the polarization of light.
- Generate an encryption key that allows for private communication.
- Encrypt, Transmit, and Decrypt a secret message.
- Examine how an Eavesdropper causes errors in transmission that can be detected
- Demonstrate the steps of the BB84 Encryption Protocol.

**FEATURES:**

- Designed for Educational, Demonstration, and Classroom Use
- Complete Photonics Kit Includes All Hardware Plus Extensive Manual and Teaching Materials
- Easy to Assemble and Use
- Choose from Educational Kits Containing Imperial or Metric Components

**Accessories**

