



US 20240214064A1

(19) **United States**(12) **Patent Application Publication**  
**LEE**(10) **Pub. No.: US 2024/0214064 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **OPTICAL TRANSCEIVER AND METHOD OF  
OPTIMIZING OPTICAL TRANSCEIVER**(52) **U.S. Cl.**CPC ..... *H04B 10/0775* (2013.01); *H04B 10/0773*  
(2013.01); *H04L 1/203* (2013.01)(71) Applicant: **ELECTRONICS AND  
TELECOMMUNICATIONS  
RESEARCH INSTITUTE**, Daejeon  
(KR)

(57)

**ABSTRACT**(72) Inventor: **Jyung Chan LEE**, Daejeon (KR)(21) Appl. No.: **18/224,754**(22) Filed: **Jul. 21, 2023**(30) **Foreign Application Priority Data**

Dec. 23, 2022 (KR) ..... 10-2022-0183375

**Publication Classification**(51) **Int. Cl.***H04B 10/077* (2006.01)*H04L 1/20* (2006.01)

Provided are an optical transceiver and a method of optimizing the optical transceiver. The method of optimizing the optical transceiver includes performing power control of communication elements included in a transmitter and a receiver included in the optical transceiver based on a signal flow of the transmitter and the receiver, performing performance initialization of the communication elements based on a control range for each detailed function of the communication elements, and performing performance optimization of the communication elements based on change characteristics of a bit error rate (BER) for each detailed function of the communication elements.

