

FLUORESCENT ANTENNA, OPTICAL RECEIVER, AND SIGNAL PROCESSING METHOD

ABSTRACT

Embodiments of this application provide a fluorescent antenna, an optical receiver, and a
5 signal processing method, and relate to the field of optical wireless communication technologies,
to increase a quantity of optical signals supported by the optical receiver, enhance a spatial
multiplexing capability, increase a communication rate, and support larger-scale MIMO and uplink
multi-user access. The fluorescent antenna includes at least one layer of fluorescent array, the
fluorescent array includes a plurality of fluorescent units, and an isolation layer used to isolate
10 emergent optical signals converted by adjacent fluorescent units is included between adjacent
fluorescent units. The fluorescent units include at least one fluorescent region; and when the
fluorescent antenna includes one layer of fluorescent array, the fluorescent units are all fluorescent
regions; or when the fluorescent antenna includes at least two layers of fluorescent arrays, the
fluorescent unit further includes at least one transparent region. In two adjacent layers of
15 fluorescent arrays, a transparent region of the first layer overlaps a fluorescent region of the second
layer, and an incident optical signal arrives at the fluorescent region of the second layer through
the transparent region of the first layer.

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FIG. 5