Huybrechts 1.1

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1.1.1 If f is such a holomorphic function, then so is $g = e^{if}$. But $|g| \leq 1$ because $\Re(if) = -\Im(f) < 0$. Therefore g is constant, so f is constant.

1.1.2

1.1.3 If $f : U \subseteq \mathbb{C}^n \to \mathbb{C}$ has a local maximum at $(p_1, ..., p_n)$ in the interior of U, then the holomorphic function $z \mapsto f(z, p_2, ..., p_n)$ has a local maximum in the interior of its domain, a contradiction. The same idea is used to prove the identity principle.

1.1.4