Let $A$ be an Artin algebra and $D(A)$ its bounded derived category. We recall that $D(A)$ is called discrete and $A$ derived discrete if for any sequence $h = (h_i)_{i \in \mathbb{Z}}$ of non-negative integers with almost all the $h_i = 0$, there are only finitely many isoclasses of indecomposable objects $X \in D(A)$ with length of $H^i(X) = h_i$ for all $i \in \mathbb{Z}$.

We prove the following:

**Theorem** The Artin algebra $A$ is not derived discrete if and only if there is a bounded complex of projective $A$-modules $X = (X^i, d^i_X)$ with the following properties:

(i) for all $i$ the image of $d^i_X$ is in the radical of $X^{i+1}$;

(ii) $X$ is indecomposable in the homotopy category of complexes;

(iii) there is some $j$ such that $H^j(X)$ has not finite length;

(iv) for all $i$, $H^i(X)$ has finite length as left $E$-module, where $E$ is the endomorphism ring of $X$ in the homotopy category of complexes.

A complex as before is called generic complex. In case $A$ is a finite-dimensional algebra over an algebraically close field, we also consider the tame representation type in terms of generic complexes.